SEPTEMBER 19, 1942

Railway Age

Founded in 1856

115 Years of Progress

IT WAS in February, 1827, that the Baltimore and Ohio Railroad Company received its incorporation — more than a century since it pioneered rail transportation in America. The question then was, literally, "What about motive power — horse power or steam?" The answer was steam, the best available at that time, and for 100 years the B. & O. built bigger and better steam power — until — the Diesel made its challenge for rail supremacy. American railroads were again at the crossroads. This time it was Steam or Diesel.

Here again — the Baltimore and Ohio demonstrated its customary vision by being the first eastern railroad to adopt Diesel power for passenger service. Today, General Motors Diesel Road Locomotives haul their famous fleet of passenger trains, which includes the Capitol Limited, National Limited, Royal Blue, Columbian, Diplomat, Ambassador and Shenandoah. And within the past year, 26 GM Diesel Switchers have been placed in service.

Now, B. & O. progressiveness again asserts itself by the installation of General Motors 5400-hp. Diesel Freight Locomotives, which will release a considerably larger number of heavy steam locomotives for other important services. This means a construction saving of over 50 per cent in vital materials — because one ton of materials in a GM Diesel Locomotive will do the work of more than two tons of materials in a steam locomotive.

TRANSPORTATION IS VITAL TO VICTORY

ELECTRO-MOTIVE DIVISION

GENERAL MOTORS CORPORATION — LA GRANGE, ILLINOIS, U.S.A.

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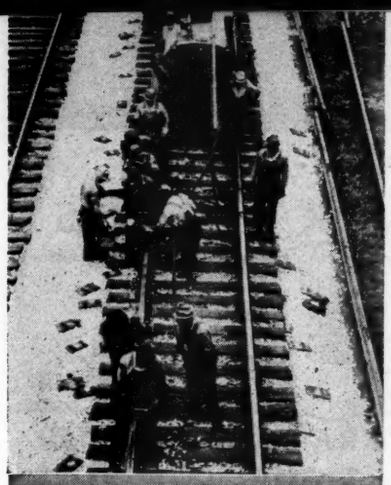

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In This Issue

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provide **RAIL TRANSMITTED SIGNAL CONTROLS**

= INCREASED TRACK CAPACITY + CONSERVATION OF CRITICAL MATERIALS + GREATER USE OF EXISTING EQUIPMENT

This combination can produce the greatest increase in transportation capacity per unit of material employed!

TWO modern "Union" Signaling Systems have been installed extensively during recent years to meet the pressing need for increased transportation capacity with a minimum use of critical materials.

"Union" Centralized Traffic Control has provided increased track capacity *quickly* where the carriers, under their former methods of operation, had more traffic than their locomotives could handle over their existing trackage.

"Union" Coded Track Circuit Control has provided rail-transmitted signal controls, longer track circuits, better shunting sensitivity, foreign current protection and elimination of signal-control line wires.

In installations where *both* of these systems have been employed, track capacity has been increased through a more flexible and efficient method of train operation. Greater use of existing locomotives and cars has been obtained because freight trains have saved an average of over a minute a mile in C.T.C. territory. Line wires were greatly reduced or entirely eliminated and a substantial saving in the use of critical materials was accomplished.

UNION SWITCH & SIGNAL COMPANY

SWISSVALE, PA.

NEW YORK CHICAGO ST. LOUIS SAN FRANCISCO

RAILWAY AGE

Efficiency FOR VICTORY

Answering a Question

The recent performance of the railways has given a very interesting and significant answer to a question they were asked three years ago.

The war in Europe had just begun; and our government was making a preliminary survey of the resources we could muster if we became involved. Among other questions propounded to industry was one submitted by Secretary of the Treasury Morgenthau to the railways, and answered by the late Carl R. Gray, then vice-chairman of the Union Pacific, and the late Daniel Willard, then president of the Baltimore & Ohio. It was as to how large an increase of freight traffic the railways could handle.

Messrs. Gray and Willard made him a report based upon conditions in May, 1939; and they estimated that the railways, with their locomotives and cars in the condition they were then in, could handle 50 per cent more freight traffic than they had in that month, and that, by putting their equipment in good condition, they could handle an increase of 55 per cent. Messrs. Gray and Willard also estimated that the railways could handle a traffic equal to that of 1929 with 350,000 to 400,000 fewer freight cars than were available in 1929.

Cock-sure New Dealers in Washington, with whom doubtless the wish was father of the thought, ridiculed the Gray-Willard report; prepared for President Roosevelt a report purporting to show there should immediately be ordered 500,000 new freight cars and a corresponding number of new locomotives; and predicted that if we became involved in the war private operation would "break down" and government operation would have to be adopted because of the blindness and stupidity of private management.

What since then actually has occurred on the railways? There were no two men better qualified in 1939 to estimate railroad capacity than Messrs. Willard and Gray. They had both risen through the operating department; were recognized as two of the ablest operating men the railroads had ever had; Mr. Willard, in the first World War, had been chairman of the Advisory Commission on National Defense and had initiated the formation of the Railroads' War Board; and Mr. Gray had been director of operation of all the railways of the United States in 1918 in the government's Railroad Administration. And yet if they were now living probably both would be astonished by what the railways have actually done.

In May, 1939, the railways had only 23,208 freight locomotives, as compared with an average of 29,149 in 1929, and only 1,878,494 freight cars on line (including those privately-owned) as compared with an average of 2,467,165 in 1929. During the summer of 1942 they had about 22,000 freight locomotives and about 2,025,000 freight cars on line—that is, actually fewer freight locomotives than in 1939, but about 150,000 more freight cars.

How much, then, has the traffic handled increased? In May, 1939, it was 26 billion ton-miles, and had increased in August, 1939—just before the war in Europe began—to 31 billion. In the entire year 1941 it was 5 per cent larger than in 1929 and was handled with 562,000 fewer cars than were available in 1929. In May, 1942, it was 58½ billion ton-miles, or 128 per cent larger than in May, 1939. In August, 1942, it was probably 64 billion 400 million, an increase of 150 per cent over May, 1939, and of 105 per cent over August, 1939.

In answering Secretary Morgenthau's question three years ago, the railways certainly underestimated their strength; but where does that leave the New Dealers who criticised their answer?

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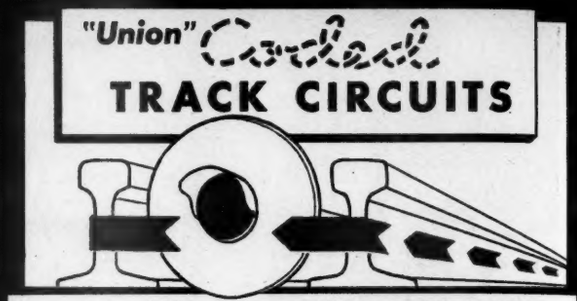

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Controlling the Future

"Post-war planning" and "research" are likely to become exasperating terms to men working to human capacity in handling the greatest railroad traffic in history, with equipment and materials scarce and labor becoming so. But the war will end. Even if it is long, its duration as the principal source of traffic will be brief. Hence it is a responsibility of railway management to learn all it can about prospects of traffic following the war; and that is what "post-war planning" and "research" mean, in their economic application to the railroads.

In recent issues of *Railway Age* (August 22 and 29) there has been published an outline of the comprehensive studies being made by the New Haven with respect to traffic developments in its area. Within the past year similar articles have been published descriptive of activity of this kind on several other railroads. The analyses these roads are making of their traffic ("potential" as well as actual) enable them to adjust their services promptly at all times in a manner to maximize their revenues. Such studies should enable those who conduct them to "see ahead." They should not only know more promptly and comprehensively than would otherwise be possible what *is happening now* in the transportation market, but also develop information from which they can predict with some assurance what *is going to happen.*

Such research can be made of service in a much more constructive way than that of merely forecasting traffic. Forecasts of the weather, for example, may be useful, but cannot alter what is going to occur. Forecasts of railway traffic based on ascertained trends, may, on the other hand, inspire adoption of measures designed to change these trends, and thus cause the railways to get a larger share of the prospective post-war total traffic than they otherwise would get.

For years prior to the reduction of coach fares from 3.6 cents to 2 cents a mile, the advisability of making such a change was debated. There was not much objective, wide-scale study or experimentation done; and the debaters mostly based their opinions on a too-limited observation within a too-narrow field. Neither side was able to convince the other, mainly, no doubt, because they had not ascertained and agreed on the facts. A railway passenger traffic manager has given us his opinion that the long delay in making this adjustment of fares was the *cause* of the establishment of the long-haul bus business. Once the long-haul bus was established, it was able to adjust itself to reduced railroad fares and continue in operation; but the field originally was made attractive for it by the high railroad coach rate. Fore-knowledge (provided by adequate research) of the results of persistence in the 3.6-cent fare would have enabled the railways (in this passenger traffic manager's opinion) to have forestalled its untoward consequences. A similar observation might be made with respect to truck competition.

When both technological and economic changes are occurring faster than ever before, special effort to get systematic information about these changes seems to be a "must" for railroad managements.

Such Cars Can't Move Oil

Petroleum shipments by rail to the eastern seaboard are being delayed in some instances by the necessity of cutting out tank cars with equipment defects. The A. A. R. Mechanical Division reports that an analysis on one road which shopped 4,262 cars in a single month showed the following classification of defects: Trucks (other than wheels), 1,382 cars; wheels, 1,242 cars; couplers, draft gears and attachments, 596 cars; air brakes, 430 cars; and miscellaneous, 612 cars.

It is obvious that the first remedy for this condition is closer inspection of cars prior to loading and the making of necessary repairs promptly either at the car owner's shop or the nearest railway repair point, as recommended in the A. A. R. report. Equally important is the inspection and repair of cars after being unloaded, so that the empty return trip will not be interrupted by mechanical failures. A tank car day is a tank car day, whether the car is empty or loaded, and the prevalent tendency to make somewhat less careful inspection of empty tank cars cannot be justified, especially in view of the intensive service now required of this type of equipment.

To facilitate making more prompt repairs to leaky tank cars, the A. A. R. Mechanical Division has revised interchange Rule 2, Par. 3, Sec. (b), effective at once, to require stenciling which shows the location of the leak, notification of the car owner by wire and the issuance of necessary authorization for repairs, by wire, within 48 hours. Car repair forces are requested to take full advantage of substitution of materials such as bolsters, side frames and safety supports, also to utilize fully the more extensive welding of car parts now permissible. Repair materials which must be secured from the car owner also should be ordered by wire.

Among the tank car parts which require particularly close inspection and maintenance are couplers and attachments, draft gears, brake beams, hangers, pins and attachments, hand rails, air brake piping, side bearings and side bearing clearances, also uncoupling levers, dome covers, safety valves, outlet valves and caps on both outlet valves and heater valves. Air brakes must be checked to make sure they are in operative condition and not overdue for periodic attention. The same may be said for journal boxes and packing, which must be up to current A. A. R. specifications to assure satisfactory, uninterrupted operation.

The foregoing recommendations and outline of work to be done show that the A. A. R. Mechanical Division has taken prompt and positive steps to: (1) improve the mechanical condition of tank cars; (2) emphasize the necessity of careful inspection before loading and

after unloading; (3) speed up the delivery of necessary repair materials; and (4) utilize substitute repair parts and welding where practicable. With the full co-operation of individual railroads and car owners, these measures are well adapted to assure a still more successful and intensive use of tank car equipment in the present emergency.

The New M. & St. L.

The reorganization of the Minneapolis & St. Louis Railroad Company and the termination of a receivership that has existed for 19 years is of special interest because it records the successful rehabilitation of a property which it was proposed to dismember and abandon in large part as recently as 1937-38, on the ground that its further operation as a corporate entity was hopeless. The fact that this railway now emerges as a solvent, going concern constitutes a tribute to the ability and persistence of the management that was instrumental in bringing this constructive result to pass; and to the initiative and ingenuity which railway managements are able to show in the face of difficult conditions. Due credit also must be accorded the patience and financial insight of those back of the management operating the property, in harmonizing its many intricate financial relationships.

This reorganization is unusual in the plan that has been adopted for the reorganization, namely, making a single railroad into two separate companies, so incorporated as to overcome objections raised by various interests, including labor unions and local governments. One of the strong points of the new set-up is that the secondary company, the Minneapolis & St. Louis Railroad Corporation, which includes the lines of lightest traffic west of Minneapolis, as well as the Winthrop-Ft. Dodge line, has no fixed bond interest and can maintain itself under "any foreseeable conditions." Still other points are the fixing of relationships between this Corporation and the primary company, the Minneapolis & St. Louis Railway Company, so that the seniority rights of the employees are not impaired; the continuance of the shops in the Minneapolis area to overcome objections by unions and local governments; the repair of Corporation equipment in Company shops on a cost basis; and an over-all improvement program to expend $4,000,000 on the lines of both companies to enable them better to compete for traffic.

The importance of energetic traffic solicitation and adequate maintenance was recognized by the present management when it took over in 1934. In the first seven years' and five months' tenure of the present management, the procurement of additional business and improvements to property have enabled the railroad to earn enough to pay off outstanding indebtedness of $2,457,684, and to spend $7,090,221 more for additions and betterments to road, property and rolling stock. At the same time the management improved operations so that the operating ratio of the railroad, 76.43 in 1941, was the lowest in its history.

Collaboration

Testimony from informed governmental quarters continues unabated in its enthusiasm for the splendid job the railroads are doing in meeting the transportation task the war is imposing upon them. There is one aspect of this performance, however, which is receiving less attention than it deserves: That is, the extent to which present railroad effectiveness is the result of inter-railroad co-operation.

What this means is that present record transportation service—under difficult conditions and with materials and labor scarce—is not merely a matter of each railroad doing its level best at its own job. There is, in addition, a great deal of assistance being rendered to the busiest roads by others not so closely pressed. The war load has fallen on the carriers quite unevenly, and, unless the roads with fewer burdens were lending a hand to those with exceptionally heavy demands on their service, the industry as a whole could not possibly be acquitting itself so satisfactorily.

The ways in which "helping the other fellow" is going on are manifold. Particularly noteworthy, of course, is the virtual "pool" which exists in car equipment—the carriers which have the greatest need for cars getting them regardless of ownership. Much the same sort of thing is occurring with respect to locomotives.

A comparison of the June, 1942, with the June, 1941, operating statistics of "large steam railways," issued by the Bureau of Economics and Statistics of the I. C. C., shows how very unevenly the war burden is falling on these 51 large railways.

How 51 Large Railways' Freight Service Performance in June, 1942, Compared, in Per Cent, with June, 1941

	Gross ton-miles (excl. locos.)	Freight train-miles	Average freight loco.-miles per loco.-day
	Number of Railroads		
Less than June, 1941	2	5	6
100 but less than 110%	8	13	10
110 but less than 120%	9	10	16
120 but less than 130%	14	16	7
130 but less than 140%	8	3	6
140 but less than 150%	6	3	2
150 but less than 160%	1	1	3
160 but less than 170%	1	..	..
170 but less than 180%	2	..	1

It will be seen from the table that the most common increase in freight traffic (gross ton-miles) among the 51 large railroads was between 20 and 30 per cent, and that this increase was cared for by a similar (but smaller) increase in train-miles. The table also discloses, however, that four railroads had a ton-mile increase of more than 50 per cent and two of more than 70 per cent, while ten carriers had increases of less than 10 per cent.

With such wide variations in the impact of the war load on the railroads, it is clear that the railroad industry as a whole can give the ultimate performance of which it is capable only if the less-heavily-burdened roads assist the more-heavily-burdened in meeting their demands. The figures indicate that such inter-railroad co-operation is actually occurring.

Hazards of Derailments Reduced*

Southern Pacific develops safety guide which holds derailed passenger cars in line with the track

By L. R. Schuster

Engineer of Car Construction, Southern Pacific

Derailment of City of San Francisco at Harney, Nev., in 1939—The Derailed Locomotive Clung to the Track; The Cars Did Not

IN spite of the many precautions taken to prevent derailments, we know they will sometimes occur, whether due to sabotage, broken rail, collision or other causes. It is important that as many safeguards as possible be provided so that the least possible hazard of personal injury or damage to equipment will be incurred.

In the summer of 1939 the streamliner City of San Francisco was derailed by a saboteur near Harney, Nev. This was a very disastrous wreck, causing considerable loss of life, many injuries and enormous property damage. The subject is not pleasant to recall and would not be brought up were it not to point out a lesson in safety which was learned as a result of the thorough investigation made of all the aspects of the occurrence.

The circumstances surrounding this derailment, as developed by investigation, were briefly these:

The train was on a curve approaching a bridge across the Humboldt river at about 60 miles per hour when it encountered a misplaced rail. That is, the receiving end of the rail on the outside of the curve had been moved in several inches toward the center of the track and spiked there in such a way that the locomotive would be expected to derail immediately and head into the canyon.

But the Diesel locomotive, while it left the rails at that point, still continued on across the bridge. The trailing cars followed the locomotive until the cars swung out of line sufficiently to contact and tear down the bridge superstructure, causing complete collapse of the bridge. It was this action that resulted in the major portion of casualties and destruction of equipment.

In the study to develop all the significant points in connection with the behavior of the train under derailment conditions, one of the first questions that came to mind was: What kept the power units in line with the rails for such an unexpected distance beyond the point of derailment?

The answer was found in examining the trucks of the power units. Diesel-electric locomotives are provided with large traction motors on the axles which drive the

How the Derailment Safety Guide Functions—The Rear Journal Box of the Truck Derailed Under the Test Car by Running over a Derailer

* Abstract of a paper read before the September 10, 1942, meeting of the Pacific Railway Club, at San Francisco, Calif.

Projections Like This Generator Bracket Tend to Slew Derailed Trucks by Contact with Angle Bars or Other Truck Fastenings

train through a pinion and gear. Examination disclosed that, after derailment, the rail was engaged in a small space between the motor frame and gear case, which acted as a skid and prevented the trucks from getting out of line with the rail. Aiding in this action were the bolts and nuts securing the binder bars to the bottom of the truck pedestals. Worn and burned marks on these bolts and nuts showed that they bore against the ball of the rail for at least part of the distance and materially assisted in keeping the locomotive parallel with the track.

The trailing cars, however, were not so fortunate. They had no traction motors and the binder bolts alone were not sufficient to hold the trucks to the rail; indeed they never had been intended to do that kind of a job.

But the City of San Francisco derailment pointed definitely to the need for an additional safety device for trailing cars, since the performance of the power units gave an inkling of the possibilities that might be developed.

We knew that the materials from which the cars were constructed were the finest obtainable. Design strength was greater than many of the heavier conventional cars and the most up-to-date safety features had been incorporated in the design. Two of these safety devices which are of particular importance in derailments are the tight-lock coupler and the bolster locking center pin. The tight-lock coupler is so designed that the knuckles will not slip by even if the cars are derailed and this is an effective safeguard against telescoping which produced disastrous results in accidents in the past. The bolster locking center pin serves to prevent the truck from coming out from under the car, which usually happened with the old type of center pin.

Tested Under Severe Conditions

Both of these devices did a very fine job in the City of San Francisco derailment. The trucks of the two cars turned over down the embankment were still attached to the car bodies and the first five cars were still coupled.

It was apparent then, that if some practical means could be provided to keep trucks from sluing or turning crosswise under the car, one of the principal hazards in derailments would be very materially overcome. The lack of such a device has, in the past, been largely responsible for the picture most of us carry in our minds of train wrecks we have seen in newspapers from time to time, wherein cars are jackknifed, turned over or strewn about the landscape.

Such a device has now been developed and applied to a large number of cars throughout the country. This device is called a Derailment Safety Guide† and in the short time it has been in service has had several opportunities to prove its worth. It is simple in construction, adds very little weight to the equipment and in some applications, principally on passenger-car trucks, takes the place of the usual pedestal tie bar or binder. At its outside edge, when applied to the pedestals of outside journal boxes, is a vertical flange which is designed to extend down to a minimum distance of 4½ in. above the plane of the top of the rail when the wheels are new.

When a wheel drops to the ties and moves slightly to the side, the flange engages the ball of the rail and prevents further side movement. Its action then is to skid along the rail and keep the truck in line with the car body. It is this action that eliminates the chief cause of

How the Test Car Came to Rest After a Derailment at 30 Miles an Hour on a 12-Deg. Curve

† Patent on this device is held by George McCormick, formerly general superintendent of motive power, and B. M. Brown, general superintendent of motive power, Southern Pacific.

Derailment of the Lark at Wellsona, Calif., Caused by a Rear-End Collision on September 19, 1941—The Trucks Were Equipped with the Derailment Safety Guides

jackknifing with its resultant damage to equipment and increased liability of injury to passengers.

Tests of Derailment Safety Guides

Before applying any of these safety guides to Southern Pacific cars, several tests were conducted in which the test car was actually derailed. For these tests a flat car was fitted on one end with a streamline type of passenger-car truck equipped with Derailment Safety Guides and the car was partially loaded with rails to simulate service conditions. The opposite end had a standard freight-car truck.

Four tests were made in this instance at speeds of 10, 20 and 30 miles per hour and were accomplished by either pulling or kicking the car over a standard portable derailer except in the case of the third test. In this test, one end of one rail was moved six inches toward the center of the track to create a condition similar to that which derailed the streamliner City of San Francisco and the test car was kicked from the end of the train at a speed of approximately 20 miles per hour.

One of the photographs is a view close to the rear wheel of the derailed truck showing the guide flange firmly pressed against the rail.

Another illustration shows the position of the generator bracket on the end of the truck frame. In a derailment of this nature, brackets of this kind are very liable to contact angle bars or other track fastenings and cause the truck to slue.

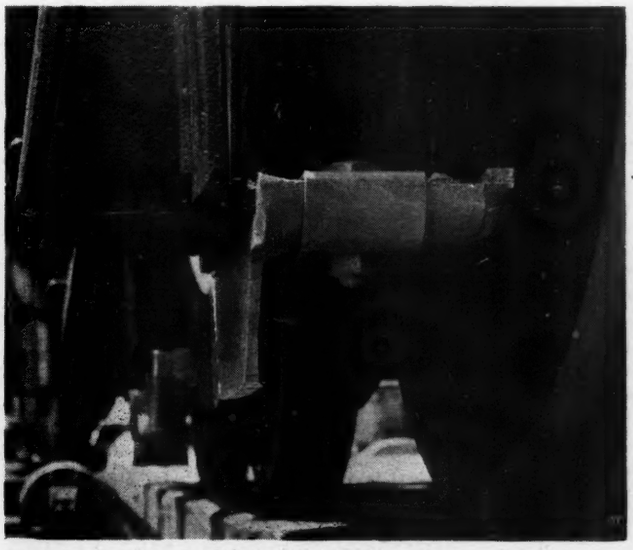
The fourth test in this series was made by cutting off the test car at a speed of approximately 30 miles per hour on a 12-deg. curve. A standard movable derailer was used and the car traveled a distance of 75 ft. after derailing. The truck equipped with Derailment Safety Guides was held to the rail for the full distance traveled. In the photograph taken after this test note how the front truck is in line with the track

How the Safety Guides Functioned on a Rail Which Overturned in the Wellsona Derailment

A Derailed Equalizer Truck Under One of the Lark Pullman Cars

while the rear truck, not equipped with the safety device, moved over until the wheels on this side were against the opposite rail. The rear wheels of the front truck did not derail although they passed over the derailer. This indicates that the safety guides on the front pair of wheels held the truck sufficiently in line to cause the rear wheels to drop back on the rails. In one of the other illustrations the generator bracket on the truck was shown. At the extreme left of this view it will be seen that one lug of this bracket is broken off due to the severity of impact during this derailment.

In all of the derailments made during this test, marks on the rail as well as on the safety guides indicated that a very heavy force was exerted on the guides and the successful results attest to the adequate strength, not only of the safety guides themselves, but to the method of application.



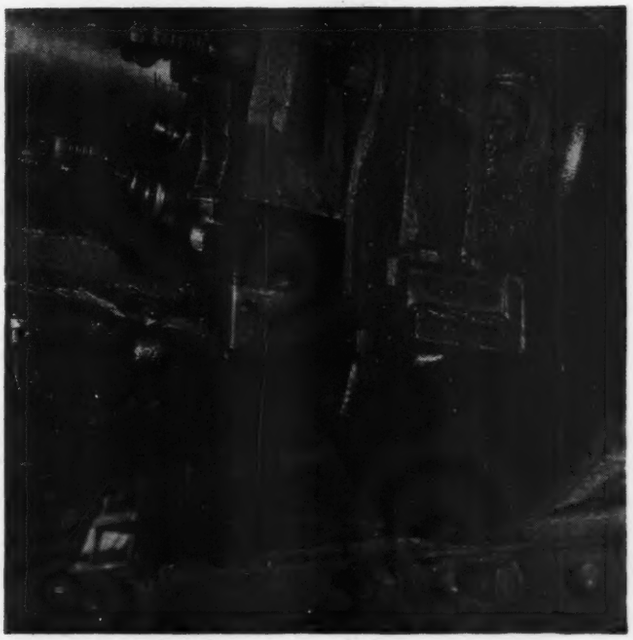
Application of a Safety Guide to the Pedestal of a Conventional Six-Wheel Equalizer Type Passenger Truck

When we had studied and digested the evidence produced by these tests we arranged to apply derailment safety guides to all of our new type streamline cars, including the City of San Francisco. Our neighboring lines and the Pullman Company cooperated with us to the end that new Pullman cars placed in service in the Lark train as well as new Pullmans recently delivered for Overland and Golden State Limited service are equipped with this safety device.

Effect of Safety Guides in Lark Derailment

Derailments of passenger trains are not common, due to rigid inspection and maintenance of equipment and right-of-way. But sometimes they will occur and when the streamline Lark was involved in an unfortunate rear-end collision last September we were extremely thankful that this train was completely equipped with safety guides.

The standing Lark was struck from the rear by a fast merchandise train traveling at a speed of about 22



How the Safety Guides Are Applied on an Engine Truck with Inside Journal Bearings

miles per hour at the time of the impact. The rear car was pushed to one side and practically destroyed by the impact and the locomotive of the freight train hit the end of the next car. Trucks of all but the first few cars in the train were derailed and there was a marked tendency for all couplings to jackknife. This is shown in the illustration. The safety guides, however, lapped over the rail as these trucks were derailed and prevented the cars from jackknifing; the lateral reaction was so severe that rails were turned over under the cars. A closer view of this is shown in the illustration. It will be seen that on one truck the flange of one safety guide has lapped over the ball of the rail and the other has caught the bottom flange of the overturned rail.

After the accident, some of the guides were examined and marks on the metal showed that they had skidded for some distance on the rail in a longitudinal direction.

In the view of the equalizer-type truck under one of

(*Continued on page 448*)

Train Crews as Railway Salesmen

New York Central has "traveling conductor" whose job it is to help trainmen give kind of service which turns customers into friends of the carrier

THE New York Central (Lines East of Buffalo) has included a "traveling conductor" among its supervisory staff since the first of 1941. The position is a new one in which the incumbent is still learning by experience what functions he can best serve. In general, however, his task is to encourage the development—especially among passenger train crews—of the following attributes:

1. Safety.
2. Courtesy on all occasions.
3. Propriety of conduct, especially in relations with the public.
4. Neatness of uniforms and general appearance.
5. Proper handling of tickets.
6. Prompt reporting for duty.

The traveling conductor reports to the assistant general manager. He is not authorized to issue orders to trainmen, nor does he "write them up" for their shortcomings; instead, he counts upon gaining acceptance of the course of action he advances, by appealing to employees' self-respect and their self-interest in protecting the source of their livelihood.

Outgrowth of Employee-Management Meeting

The establishment of this position had its origin in a joint meeting of representatives of management of the "Lines East" with local and general chairmen of the transportation organizations, held at Syracuse, N. Y., in the fall of 1940. The realization had been growing, especially among train and engine service employees and their organization chairmen, that the carrier and its employees had mutual interests, particularly in attracting and holding traffic. Recognizing this disposition on the part of employee spokesmen, the management arranged for the Syracuse meeting, where—it was made clear—every encouragement would be given to a frank discussion of mutual interests.

Employees present at the meeting expressed great interest in pleasing the customers—but it was also evident that the belief existed here and there that management was not greatly concerned over the matter. "If we make a suggestion and it costs money, nothing will be done." "If the management isn't interested in these passengers, what use is it for us to be?" Such opinions existed among men whose natural inclinations were favorable to co-operation with the company. Clearly, all that needed to be done was to clear up some misunderstanding among employees as to management's interests and objectives, and considerable employee intelligence and good-will would immediately be channeled into improved dealings with the public.

It was to create such improved understanding that the position of traveling conductor was established. To the job was named an alert and vigorous man from the ranks of the conductors—who at the Syracuse meeting had demonstrated his interest in the subject, revealed constructive ideas thereon, and had shown that he was articulate.

It was clearly recognized at the Syracuse meeting that the passenger conductor is the "goat" with the passengers for the errors of many others besides himself.

Employees Have an Interest In Serving the Public Well

When there are many new railway customers—who may be so only temporarily unless favorably impressed with railroad efficiency and consideration—the time is opportune for a railroad to demonstrate friend-making qualities.

This task largely devolves on train employees, because they are the ones in closest contact with customers for the longest periods. They have as much interest as their employers in making temporary patrons permanent, because upon such will post-war jobs depend.

The trainmen's job is not an easy one—especially with so many new and promoted men, at unfamiliar jobs. The New York Central has found the services of its "traveling conductor" a valuable aid, from both employee and management viewpoints.

The conductor, under such circumstances, knowing his own innocence, is, naturally, not apt to take the passenger's criticisms in good part.

In approaching the question of treatment of passengers, the traveling conductor does not deal with trainmen in an admonitory manner. He assumes that they have at least a latent interest in doing their jobs well—so he asks them for advice on how management can *help them* give more satisfactory service to the public. Many practical suggestions have thus been elicited from employees. Naturally—once they have such concrete evidence of the management's interest in more satisfactory service, they are in a receptive frame of mind for suggestions for improved performance.

In addition to a great deal of personal contact with trainmen while on duty, the traveling conductor also holds meetings twice yearly at six or seven important terminals. These meetings are scheduled at a given terminal on several successive days. They begin at 9 a. m. and run through until 6 or 8 p. m. By such hours, and by continuing for several days, practically

every train service employee who is desirous of attending is afforded the opportunity to do so. Attendance is not compulsory, and no compensation is provided for those who participate. This is the policy, because it is believed by the management that the subject matter of the meetings is in the interest of the employee as well as of the railroad. The attendance of about 75 per cent of the men in passenger train service supports this point of view.

A typical announcement of one of these meetings—issued by the superintendent—is reproduced herewith, which conveys the general atmosphere under which these sessions are conducted. Attendance is also stimulated by the interest expressed to their fellow employees by those who have attended.

To All Passenger Conductors and Brakemen:

Discussions on transportation matters and co-ordination of effort in the handling of passenger work will be held at the Railroad Y. M. C. A. on the following dates:

Monday, Tuesday and Wednesday
August 3rd, 4th, and 5th

9:00 A. M. 1:30 P. M. 5:00 P. M.

If necessary, evening meetings will be arranged for those who cannot attend at the above times.

All Passenger Conductors, Passenger Brakemen and any others who have been qualified for passenger work are urged to attend. The handling of transportation and other features of passenger operation will be discussed.

Mr. William Hauck, Traveling Conductor, will conduct these discussions and there will be present representatives of the Auditor of Passenger Accounts and of the Passenger Traffic Department.

Particular stress will be placed on the proper handling of passenger transportation and it is felt that definite beneficial results will be gained.

It is desired that as many men as possible attend these discussions.

Superintendent

The procedure at these meetings is one of answering employees' questions, rather than of "preaching at" them. The traveling conductor has a demonstration panel on which air conditioning control apparatus is mounted, by means of which he is able to show how trainmen can regulate this apparatus to provide the maximum degree of passenger comfort. At each meeting representatives of the auditing and passenger traffic departments are present—to whom technical questions with reference to the proper handling of tickets and reports may be referred, if necessary. Thus is provided a ready, informal, friendly means by which the employee may receive answers to *his own* questions, and be encouraged freely to offer *his own* suggestions.

Train Operation Is a Profession

The opportunity is afforded—without obtrusion—for the traveling conductor to impart his own philosophy of the job. Many constructive suggestions so arising have been found to be definitely beneficial to the service. It happens that his attitude is one of great respect and enthusiasm for the occupation of conductor. As he expresses it:

"The conductor is a professional man. How many doctors or lawyers have as many years of preparation for their work as a passenger conductor has? For that matter, how many doctors or lawyers earn more for the time they put in? The conductor's job is a dignified one, and is worthy of the best a man can put into it. The trainman or conductor, in joining his organization, takes a pledge to do his work well—and for public respect to himself and his organization, he will make good on that pledge.

"Take the matter of personal appearance. The employee who thinks about it will be glad to keep his uniform pressed—and wear a neat white shirt and blue tie. After all, if the employee is going out to *spend* $25 for an evening's entertainment on a special occasion in a high-class hotel, he will be glad to dress neatly in his best clothes. Just so, if he stops to think about it, when the same employee is going to *make* $25 on the job to which he has devoted his life, he will be glad to wear clothing which will promote public respect of his calling, and not detract from it.

"The conductor is the real railroad salesman. After all, the man who sells a customer his ticket deals with him only a few minutes. But the customer is in the hands of conductors for, perhaps, ten hours or more. It is from the way the conductor deals with the passenger—his courtesy, and the efficiency with which he handles his train—that the passenger largely forms his impression of the railroad, either good or ill."

The traveling conductor has no formal responsibility with respect to discipline—and yet his services have been useful in that connection. That is to say, by his

Traveling Conductor Hauck Maintains Close Personal Contact with Train Crews

intimate contact with many employees and his appreciation of the necessity for a strict regimen in work involving safety of human life, he is able to make this point of view more understandable to the employees.

The success which the new supervisory job is attaining appears to derive from the fact that its duties are not just a more intensive check on employee performance, but rather that it provides a channel—not ordinarily existent—into which spontaneous employee zeal, actual and latent, for professional excellence may flow. Of course, if that employee zeal does not exist, this type of job will fail of its purpose. That it does exist—and in remarkable quantity and quality—New York Central experience plainly attests.

The job is of particular benefit now that so many new employees are entering service—and freight men are being promoted to passenger work. One of the messages which the traveling conductor continually gives—and one to which all employees are most receptive—is that of silence regarding military matters. As he says:

"Our fellows are all loyal and would not consciously reveal information of this kind. However, no effort is spared to bring home to them how careful they should be to avoid, even inadvertently, revealing information of this character. As I explain: A couple of fellows walk through Grand Central and one tells the other about the run he is getting, involving a military movement. Some stranger is taking it all in and I point out to them that if something were to happen to that train, those two men would regret it as long as they lived. I explain this to our fellows and they all understand, and they are keeping Uncle Sam's business to themselves."

Carl C. Gibbs of Cleveland Dies

Head of National Malleable & Steel Castings spent entire career in service of company

Carl C. Gibbs

CARL C. GIBBS, president and a director of the National Malleable & Steel Castings Co., of Cleveland, Ohio, died on September 9 as reported in the *Railway Age* of September 12. Starting in the sales department of the National Malleable & Steel Castings Co. in 1906, he successfully worked his way through various positions in the company until he rose to the presidency in 1934.

Mr. Gibbs resided in Shaker Heights, Ohio. He had been ill for about four months and at the time of his death was in his 60th year. Funeral services were held at the First Baptist Church, Shaker Heights, on September 11, and burial took place at Indianapolis, Ind. on September 12.

Mr. Gibbs was born in Rush county, Indiana, on October 10, 1882, the son of William W. and Carrie Calice Wikoff Gibbs, and received a high school and commercial college education. He began his career with the National Malleable & Steel Castings Co. as secretary to the sales manager of the Indianapolis, Ind., works in 1906, and continued in that position until 1910. For the subsequent nine years, from 1910 to 1919, he served as a salesman at the Indianapolis plant, and in 1919 was made sales manager of the company's Cleveland, Ohio, works. He returned to Indianapolis in the following year as manager of that plant, in which position he remained until 1929. He was appointed assistant to the president in 1929 and served five years in that post before his elevation to the presidency in 1934.

The National Malleable & Steel Castings Co., which Mr. Gibbs headed, manufactures malleable iron and steel castings, anchor chains, steam shovel chains, couplers, draft gears, journal boxes, side frames, bolsters and other railroad specialties. For the automotive industry the company also produces malleable iron, steel and special alloy materials used on passenger cars, trucks and tractors. It has malleable iron casting plants located at Cleveland, Ohio; Chicago; Indianapolis, Ind.; and steel casting plants at Cleveland; Sharon, Pa.; Melrose Park and Chicago.

At the time of his death, Mr. Gibbs was a director of the Railway Business Association, having been elected a member of the governing board in November, 1935. He was active in the industrial life of his city, being a director of the Cleveland Chamber of Commerce, a member of the industrial relations committee of the National Association of Manufacturers, and of the Federal Reserve Board committee. He was also assistant chief of the Cleveland district ordnance advisory board. He was a member and had served as a director of the American Foundrymen's Association. Mr. Gibbs belonged to the Mayfield Country Club, the Pepper Pike Country Club, the Union Club and the Tavern Club in Cleveland, and was a member of the Chicago club in Chicago.

Looking West Along the Elevated Tracks at Dunkirk, N. Y., Toward the Passenger Platform, Showing the Low-Level Passenger Station at Extreme Left. Photo Courtesy of the Department of Public Works, State of New York

Dunkirk Grade Separation Project Has Interesting Features

New York Central work in Western N. Y. entailed the construction of bridges across seven streets and the elimination of 13 crossings

A GENERAL separation of grades between the streets of Dunkirk, N. Y., and the multiple-track line of the New York Central through that city was recently completed at a cost of about $3,000,000. Accomplished by elevating the tracks for a distance of about 1¾ miles, this project involved the elimination of 13 grade crossings at intersecting streets and also entailed the removal of the tracks from a street that they had occupied longitudinally for a considerable distance. Bridges were constructed to carry the tracks across seven of the intersecting streets, and the remainder were closed to vehicular traffic, although a pedestrian subway was constructed at one of them. Also, the street that was formerly occupied longitudinally, which now flanks the elevated line on one side, was widened and improved, so that adequate provision was made for the movement of cross traffic on this side of the tracks between the closed streets and the subways.

In effecting the separation of grades, the tracks were shifted laterally somewhat, and this necessitated the removal of a considerable number of both private and railroad-owned buildings, the latter including the company's freight house. This structure, and most of the other railroad buildings involved were replaced with new buildings of modern construction. Another complication was introduced by the fact that the New York Central tracks are crossed within the limits of the elevated section by an industrial lead of the Erie, and it was necessary to incorporate this crossing in the elevated layout.

Dunkirk is located 41 miles west of Buffalo on the Central's main line between New York and Chicago. Before the grade-separation project was started, the railroad had four tracks throughout the territory affected, three of which were main tracks (two eastbound and one westbound), while the other was an industrial track serving various industries. Elevation of the tracks made service to industrial sites on the low level impracticable; hence, all four tracks in their elevated position serve as main tracks.

The Situation Prior to Changes

The railroad passes through the city generally in an east-west direction, and in their original location the tracks were located at grade in Third street for about two-thirds of a mile. In addition, a total of 13 streets were crossed at grade, all within a distance of about 1.3 miles, the most easterly of the crossings being at Roberts road and the most westerly at Brigham road (see accompanying drawing). The only intersection in this area at which the grades had previously been separated was at Woodrow avenue, near the westerly end, where a timber overpass carried street traffic across the tracks.

The New York Central uses a station owned by the Erie at Dunkirk, which is located on the south side of the tracks immediately east of Main street. The line of the Erie that is involved here is known as the Dunkirk branch, and extends to a connection with that com-

pany's main line at Salamanca, N. Y. This line, which now carries freight traffic only, approaches Dunkirk from the southeast and, in reaching the passenger station, it extends along the south side of the New York Central tracks for some distance. Connecting with the main track of the Erie is an industrial lead that serves an important dock area on the north side of the New York Central tracks. This lead gains access to the north side of these latter tracks by means of a series of crossovers located west of Roberts road.

Still another line of railroad enters somewhat into the picture at Dunkirk. This is the Allegheny Valley branch of the New York Central, which extends in a southerly direction from Dunkirk to Titusville, N. Y. The two connections between this line and the main line at Dunkirk embodied a wye track with the east leg connecting with the south yard of the New York Central and the west leg connecting, through the Erie track near the passenger station, with the New York Central southerly main track. This wye was formerly used by the latter road for turning main line locomotives. Incidentally, passenger service over the Allegheny Valley branch was abandoned shortly before work was undertaken on the grade separation project.

Other trackage of the New York Central at Dunkirk includes two yards, both of which are located immediately east of Roberts road. In one of these, the tracks parallel the main line, and this one is known as North yard. The other yard, which is the smaller of the two, is at an angle with the main tracks on their south side, and is known as South yard.

Bridges at Seven Streets

In the grade-separation project, the railroad tracks were elevated on an embankment and, as already mentioned, subways were constructed at seven of the intersecting streets, namely, from east to west, Roberts road, Main street, Park avenue, Washington avenue, Central avenue, Swan street and Brigham road. In addition, a pedestrian subway was built at Robin street. The maximum raise in the grade was 17 ft., at Washington avenue, approximately midway of the elevated section.

Originally the profile of the railroad's tracks through Dunkirk took the form of a slight sag, with descending grades of about 0.3 per cent from both directions. In their elevated positions, the tracks ascend from both directions on grades of 0.3 per cent, with the apex in the vicinity of Main street.

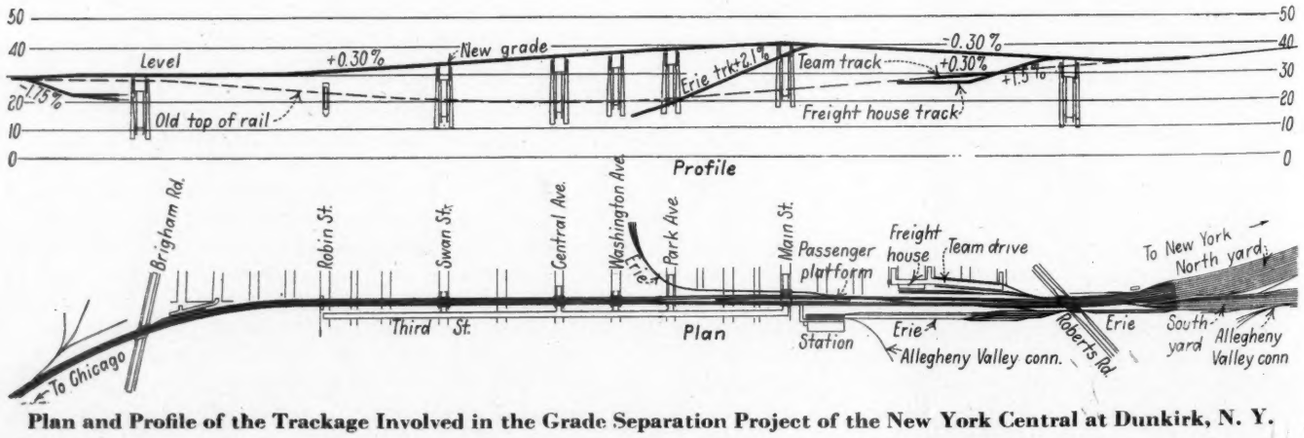
As mentioned previously, the tracks in their original location occupied Third street for a considerable distance, this occupation being such that only a narrow strip of this street along its southerly side was available for vehicular traffic. To improve traffic conditions at the street level, the tracks were shifted laterally to the north sufficiently to vacate the greater part of Third street, permitting this thoroughfare to be improved and widened and incorporated in the new layout as a cross-connection between the streets that lie at right angles to the tracks. In the new arrangement, Third street flanks the railroad embankment on the southerly side from Main street on the east to Robin street on the west, a distance of about two-thirds of a mile. It connects with all the north-south through streets except Roberts road and Brigham road, which are at the extreme opposite ends of the elevated section.

As now improved, Third street has a paved roadway width of 40 ft., with a 12-ft. parking strip, between Main street and Central avenue, and a paved width of 35 ft., with a 17-ft. parking strip, between Central avenue and Robin street, the parking areas being directly adjacent to the railroad embankment.

Precast Cribbing Used

Throughout the length of the improved part of Third street, the adjacent side of the railroad embankment is held behind a retaining wall of precast concrete cribbing, surmounted by a pipe railing in which the posts are set in precast concrete foundation blocks. Elsewhere the embankment has natural slopes except for two comparatively short concrete crib walls on the north side. The slopes above the retaining wall along the Third street side of the embankment are planted with barberry bushes which enhance their appearance.

Since that part of the city that is traversed by the railroad consists of a fairly congested business, industrial and residential district, it was necessary to remove a considerable number of buildings from the area along the north side of the company's property to make way for the tracks in their new alinement. Among the private buildings that it was necessary to remove were a four-story hotel, a large seed packing plant, a bank building, a restaurant, and numerous private dwellings. Also, many railroad buildings were involved, including the freighthouse, whose former location between Park and Washington avenues now lies directly under the four-track elevated line. To replace the abandoned freighthouse, a new structure of modern construction was built at the ground level on the north side of the tracks near the easterly extremity of the elevated section, where it is reached by a lead having a grade of 1.5 per cent.



Plan and Profile of the Trackage Involved in the Grade Separation Project of the New York Central at Dunkirk, N. Y.

Other railroad buildings that had to be removed because of the shifting of the tracks included several motor-car houses, a motor-car repair shop, a yard office building, a storehouse, a lumber shed, a carpenter shop, tool houses and offices for the section foreman and signal maintainer, and various lesser structures. Most of these buildings were replaced with new structures, placed for the most part near the easterly end of the project, which are of frame construction with walls and roofs of asbestos-cement shingles. Another facility that was removed was a 50,000-gal. steel water tank, which was replaced with a new steel tank situated a short distance east of Roberts road. Also, because of changes in the Erie's tracks, it became necessary to replace an existing track scale of this company with a new facility at a different location.

Passenger Facilities

Since it is located on the south side of the tracks, it was not necessary to disturb the existing Erie passenger station in carrying out the track-elevation project. For the present, the New York Central is continuing to use this station although it is planned ultimately to replace it with a modern facility, especially adapted to the needs of the elevated layout. For handling passengers at the higher track level, a single island platform was provided between the two center tracks at a point opposite the old station. This platform is reached through a combined passenger and baggage subway, 9 ft. by 20 ft. in cross-section, which is of concrete and steel construction.

The platform, which extends over Main street, is 1,200 ft. long, and for 311 ft. of its length near the center it is protected by a butterfly-type canopy, consisting of steel columns and framing and a roof of precast concrete slabs. A brick headhouse on the platform encloses a baggage elevator and a stairway leading to the subway. At the entrance end of the subway, at the ground level, the opening is located in the center of a short retaining wall, built with bold attractive lines, which gives emphasis to this means of access to the track level.

In order that the passenger platform may be reached by trains operating on the outside tracks, the necessary crossovers were incorporated in the track layout in both directions from the platform. All these crossovers have No. 18 turnouts. The new track layout also includes the necessary crossovers to give the Erie access to its industrial lead on the north side of the elevated line. Situated near the easterly end of the elevated section in the area between the passenger platform and Roberts road, these crossovers extend diagonally across the tracks from southeast to northwest. From its connection with the northerly track of the New York Central the Erie's industrial lead descends to the ground level on a ramp grade of 2.1 per cent. The entire crossover layout described above is incorporated in an interlocking which is controlled by the NX system from a new signal tower located on the north side of the tracks in the vicinity of the new freighthouse. The track work also included the construction of a new wye for turning locomotives to replace the Valley Branch wye, the use of which could not be continued after the tracks had been elevated.

Details of Bridges

The street bridges that were built in connection with this project generally follow conventional practice and are all of very much the same construction. Each of the bridges has a single roadway span and two sidewalk spans. With one exception, the bridges carrying the main-line tracks have steel-beam spans which are supported on concrete abutments and steel bents at the curb lines. The decks consist of concrete slabs placed over steel plates laid on top of the beams, and along each side of each bridge there is a steel facia beam surmounted by a pipe railing with cast-iron posts.

Good Vision for Motorists

Generally the bridges have parallel wingwalls, but at the south ends of those subways that connect with Third street, the wingwalls are flared somewhat to give a better angle of vision for motorists. Most of the bridge openings measure 66 ft. between the faces of the abutments and embody a 40-ft. roadway and two 13-ft. sidewalks, although there are a number of minor variations from this rule. Generally the crossings are made substantially at right angles, although the bridges at Roberts road and Brigham road are on moderate skew angles.

The single exception in the main-track bridges to the type of construction described above occurs at the Main Street crossing. In reality there are two double-track bridges here, which are separated by the width of the passenger platform. The bridge on the north side of the platform is similar in construction to the others, but on the south side, where it was necessary to reduce the depth of the bridge deck to a minimum to obtain the desired headroom, the bridge is of through plate-girder construction. Where it extends across Main street, the passenger platform consists of a concrete slab supported by steel beams that span between the near girders of the two bridges. A separate bridge, consisting also of a through plate-girder structure, carries the Erie's industrial lead across Main street.

All of the main-track bridges are four-track structures except the one at Roberts road which carries six tracks—the four main tracks, the freighthouse lead and a yard lead. At the Roberts Road bridge, one of the sidewalks is raised above the roadway level on a fill an amount sufficient to permit a 36-in. sewer line to be carried underneath it. At this end of the bridge, the curb bent consists of a line of concrete columns, although at the other end the usual steel bent is used.

Included in the track layout at Roberts road is the Erie's main line, which, coming in from the east and south, crosses this street and continues on to the Erie station. Immediately west of Roberts road several industrial tracks branch off from this line, including the lead that extends across to the north side of the elevated tracks. As at Main street, a separate bridge, consisting also of a through plate-girder span, was provided to carry the Erie's line across Roberts road.

Construction Procedure

At all of the intermediate subways the separation of grades was achieved largely by means of the track elevation, although at all locations the street grades were depressed to some extent. However, at the two subways near the opposite ends of the project (Roberts road and Brigham road), where the tracks were raised only slightly, it was necessary to obtain the grade separations almost entirely by depressing the street grades.

Because of the lateral displacement of the new tracks, the location of the embankment for nearly the entire length of the project is in the clear of that for the two most southerly of the existing tracks. These two tracks, therefore, were continued in service in their original

locations for handling main-line traffic while the construction work was under way. However, the problem was not so simple where the new and old alinements converged at the extreme ends of the grade change, particularly in view of the fact that there was a grade-separation structure to be built at each of these locations.

Avoiding Hindrance to Traffic

The problem of maintaining traffic was especially acute in the vicinity of Roberts road, where matters were complicated somewhat by the presence of several switching and yard leads and the Erie's main track and industrial lead, in addition to the main tracks of the New York Central.

Here, to permit the Roberts Road bridge to be built in the clear, four temporary detour tracks were built, two for carrying main-line traffic and two switching leads, one of which was used by both the New York Central and the Erie. Because of the necessity of maintaining a connection at all times with the Erie's industrial lead extending to the dock area, and of keeping the existing freighthouse of the New York Central in service until the new freighthouse and its track connection could be completed, the construction work at the east end and the shifting of traffic to the high-level tracks were conducted in several stages. In the construction of the Brigham Road underpass at the opposite end of the project, it was necessary to construct only the two main-line detour tracks.

Grading

The grading on this project amounted to about 250,000 cu. yd., and was carried out by a highly-mechanized organization, particular care being taken to assure proper compaction of the embankment. The fill material was obtained largely from a borrow pit, being excavated by crawler shovels and hauled to the site in dump trucks, 20 of which were used. Other grading equipment utilized on this job included a bulldozer, a sheepsfoot roller, a 10-ton roller, and a blade grader.

This project was carried out in accordance with an order issued by the New York State Public Service Commission and under the terms of the state constitutional amendment passed in 1938 which fixed the cost to the railroads of such projects at not more than 15 per cent of the total, the remainder to be borne by the state. While the construction contracts were awarded by the State Department of Public Works, the plans were drawn by the railroad under the general supervision of J. W. Pfau, chief engineer of the New York Central, Lines Buffalo and East. The construction work was supervised jointly by the railroad and the state.

The C. B. Moon Company, Cleveland, Ohio, had the contract for the grading, the bridge substructures and the street work, while William E. Bauley & Co., Auburn, N. Y., constructed the buildings, including the platform canopy and the brick headhouse. The bridge steel was furnished and erected by the Bethlehem Steel Company, and the equipment for the signal system and track interlocking was furnished by the General Railway Signal Company. All track work was performed by company forces.

The project was undertaken on April 8, 1940, when the work of removing the buildings was started, and was completed about July 1 of this year, although the high-level tracks had been in operation for several months prior to that date.

Derailment Protection

(*Continued from page 441*)

the Lark Pullman cars, appearances would indicate that the truck equalizer functions similarly to the safety guides in a derailment of this kind. The equalizer bar is not attached to the truck by rivets, bolts or other fastenings, but the ends merely rest on top of the journal boxes and it is held there by the weight upon it. It moves up and down with the wheels, whereas the safety guide remains fixed and is therefore more dependable under various conditions.

Results obtained with the Derailment Safety Guides on streamline-type passenger equipment were so successful that we have extended the application of the device to many of the conventional type of passenger cars and also to a number of locomotives and tenders. Some 860 units of rolling stock have now been equipped.

Some of the other applications to various types of equipment are illustrated. In the application to a conventional type six-wheel truck safety clips have been provided, to prevent the guide bar from dropping in event of a lost nut or broken bolt. Also shown is a lug which bears against the back of the pedestal so that when force is exerted on the vertical flange, dependence is not placed entirely on the bolts securing the guide to the pedestals. Ends of the guide are also flanged up against the pedestal.

A short time ago the engine on one of our passenger trains on the Coast route ran over a piece of pipe at a crossing, which caused the engine truck to derail. The train proceeded for a distance of some 900 ft. before being brought to a stop. The usual experience with engine trucks is that they turn crosswise or head away from the track when derailed and result in the engine turning over, or other serious consequences. In this case, however, the safety guide held the truck in line with the track and as a result, no damage was sustained by the engine or other equipment in the train.

Not to be outdone by its brothers on passenger cars and locomotives, the tender safety guide also has proved itself under fire. In this case, which occurred at El Paso, a tender was being moved onto the turntable and due to improper alignment of the table, the tender was derailed. Under ordinary circumstances derailment of this tender in all probability would have caused a considerable delay. But the safety guides with which it was equipped, quickly came to the rescue and held the tender in line with the track so that only the front pair of wheels were derailed and the tender could be rerailed with a minimum loss of time.

We had a derailment in West Oakland yard of two of the Diesel power units from the City of San Francisco. This derailment was caused by a worn switch point and in this case, as in cases involving trailing cars, it was found that the safety guides with which these power units were equipped, lapped over the rail as expected. Notwithstanding the fact that the speed at time of derailment was not more than 10 miles per hour, the lateral force exerted on the tie-bar flanges was sufficient to turn the rail over. The safety guides came through this ordeal with only minor abrasions; however, their work was well done since their action in keeping the power trucks in line with the track assisted materially in rerailing these heavy units.

This small but sturdy newcomer to the field of safety has thus demonstrated its effectiveness under actual derailment conditions on passenger cars, on a steam locomotive, a tender and on Diesel-electric streamliner power units—everywhere that it has been applied.

William M. Jeffers in WPB Rubber Post

Union Pacific executive chosen by Donald Nelson for "tough job" in accordance with the report of Baruch, Conant and Compton

William M. Jeffers

WASHINGTON, D. C.

WILLIAM M. JEFFERS, president of the Union Pacific, was on September 15 appointed by Donald M. Nelson, chairman of the War Production Board, to be the new rubber administrator in charge of the entire rubber program. The appointment, approved by President Roosevelt, was in accordance with one of the recommendations in the comprehensive report on the rubber situation which the President received last week from his special investigating committee consisting of Bernard M. Baruch (chairman), James B. Conant, president of Harvard University, and Karl T. Compton, president of Massachusetts Institute of Technology.

The committee recommended that that the WPB chairman appoint a "man of unusual capacity and power" as the rubber administrator, and delegate to him "full and complete authority in regard to the manufacture of synthetic rubber, including research, development, construction and operation of plants." In announcing the appointment, Mr. Nelson said: "Anyone who knows Mr. Jeffers, knows also that he is an exceedingly competent executive and administrator who can do any kind of a tough job. This job is one of the toughest. I am placing Mr. Jeffers in this post with the approval of the President, and I am delegating to him all my authority. From this point on, any problem connected with rubber is a matter for Mr. Jeffers' decision and I know he will do this job."

On Job When Appointment Was Announced

In accepting the appointment, Mr. Jeffers said: "I have just been appointed rubber administrator by the chairman of the War Production Board, Donald M. Nelson. I am already at work. I intend to do whatever is necessary to carry out the assignment. I am mindful of the words used in the Baruch report, in which it is said that the existing rubber situation is so dangerous that, unless we take corrective steps, this country will face both a military and civilian collapse. This means I have a tough job. But it is also a job for all the people of the United States. The biggest stockpile of rubber we have is on the wheels of our automobiles. I ask every motorist, every truck driver, everybody who runs a car, to remember that he is now the custodian of material more precious than gold. I cannot do any more talking about the matter now. We do not need talk—we need action."

The Baruch report covered all phases of the rubber problem—supply and demand, synthetic production, scrap collection, and conservation. In the latter connection the committee, amidst other comment, noted how the Office of Defense Transportation has taken steps "to conserve rubber through consolidation and rerouting of commercial traffic." It added an expression of the committee's belief that "further savings can be made through elimination of cross hauls and more stringent substitution of alternative types of transportation not requiring rubber."

Conservation Measures

With respect to private automobiles, the committee recommended immediate institution of a tire replacement and recapping program through the allocation of reclaimed rubber for that purpose; nationwide gasoline rationing to hold the average annual mileage to 5,000 under the general direction of the Office of Defense Transportation; prompt and strict enforcement of a nationwide speed limit not exceeding 35 m. p. h. for private passenger cars and trucks; compulsory periodic tire inspection; and voluntary limitation of driving until nationwide gasoline rationing can be instituted.

Mr. Jeffers has been president of the Union Pacific since October, 1937, when he succeeded the late Carl R. Gray who at that time became vice-chairman of the board of directors. He was born on January 2, 1876, at North Platte, Neb., and entered the service of the U. P. as an office boy when he was 14 years of age. A prodigious worker, Mr. Jeffers rose to be chief dispatcher at 24, trainmaster at 29, division superintendent at 35, and general manager at 40. During the five years preceding his election to the presidency, he had been executive vice-president. Mr. Jeffers will continue in his position as president of the Union Pacific, while serving the WPB as administrator of rubber.

L. C. Sprague

M. & St. L. Is Out of Receivership

L. C. Sprague, who led the 1,500-mile line out of a financial morass, elected president of new companies

WITHIN five years after facing dismemberment and complete destruction of its entity as an individual railway, the Minneapolis & St. Louis has emerged triumphantly from a 19-year receivership. On July 24, the minimum price of $2,010,000 fixed by the court was bid by Coverdale & Colpitts, re-organization managers, at an auction held at Minneapolis. The re-organization involves the formation of two separate companies—one, the Minneapolis & St. Louis Railway Company, to take over the lines east and south of Minneapolis, about 900 miles, and the other, the Minneapolis & St. Louis Railroad Corporation, to operate the lines west of Minneapolis, as well as the Winthrop, Minn.-Fort Dodge, Iowa, line, about 550 miles.

The company and the corporation will be linked by stock ownership and, for the purposes of operation, the Corporation will be leased by the Company. The re-organization plan, as approved by the Interstate Commerce Commission, contemplates that the purchase will be financed by a $4,000,000 loan from the R. F. C., secured by 25-year 4 per cent, first mortgage bonds. The Company is authorized to issue these $4,000,000 of first mortgage 4 per cent bonds; $2,081,500 of second mortgage income bonds, series A; and 150,000 shares of common capital stock without par value; while the Corporation is permitted to issue 10,000 shares of common stock without par value.

The federal judge approved this re-organization on September — and L. C. Sprague, president and receiver under the trusteeship, was elected president of both the new companies. This epic in railway administration constitutes a tribute to astute management, for the property has emerged from its long period of financial and physical difficulties as a going concern, with its track, equipment and buildings in good condition and with an organization that is alert to its opportunities.

The M. & St. L. was plunged into receivership in July, 1923, and the countrywide years of prosperity that followed did little to better its condition. In fact, in January, 1929, the M. & St. L. was so far out of step with the prosperity of industry at large that the first order was issued for the foreclosure and sale of the property to meet the demands of its creditors. This was the first of many orders subsequently issued for its sale or dismemberment, until the present management was able to prove that a real, important and solvent railway could be made of it.

When the present management took over on December 31, 1934, it found a thoroughly bankrupt railway on its hands. Voucher drafts held awaiting payment totaled $127,069 in excess of cash on hand in banks. Equipment trust notes outstanding and overdue totaled $1,145,615 and receiver's certificates brought the total to $2,457,684. All this indebtedness has since been paid off and large expenditures for additions and betterments have also been made out of earnings.

In the 7 years and 5 months tenure of the present management—to June 1, 1942—a total of $7,090,221 was spent for additions and betterments to road, property and rolling stock, divided $2,724,705 for right-of-way and $4,365,516 for cars and locomotives. Rebuilt freight cars, suitable for flour loading, are now being turned out at the Marshalltown, Iowa, shops at the rate of one a day to augment the country's car supply.

Transferring Gross to Net

Especially marked has been the improvement made in operation. For 11 years prior to 1935, the operating ratio of the M. & St. L. hovered near the 90 mark. It was 95.64 per cent in 1924, dropped to the low record of 80.55 in 1929, and soared again to a high of 94.79 per cent in 1932; it was above 90 per cent for 5 of the 11 years. Beginning in 1935 with a rate of 88.86, the new management brought the ratio steadily downward to 76.43 in 1941.

The transportation ratio presents an even more startling contrast. For 11 years prior to 1935 it was in the 40's, with a low of 43.62 per cent in 1925 and a high of 48.28 per cent in 1932. Beginning in 1935 with 46.68 per cent, this figure has been reduced steadily until a new low of 33.35 per cent was reached in 1941.

The effects on earnings have been marked. For some years prior to 1935, the gross revenues averaged $12,439,935 a year, of which only $301,109 or 2.42 per cent was converted into net railway operating income. Of this, an average of only $141,911 per year, or 1.14 per cent, was converted into net income. Since 1935, the annual gross revenues have averaged $9,340,328, of which $942,094, or 10.09 per cent, has been converted into net railway operating income and $863,406, or 9.24 per cent, into net income. Even more striking compari-

sons are shown in individual years. In 1939, for example, the gross revenues amounted to $9,215,137, as compared with $10,297,506 in 1931—yet, while the 1931 operations resulted in a net *loss* of $110,481, the 1939 operations resulted in a net *income* of $981,562.

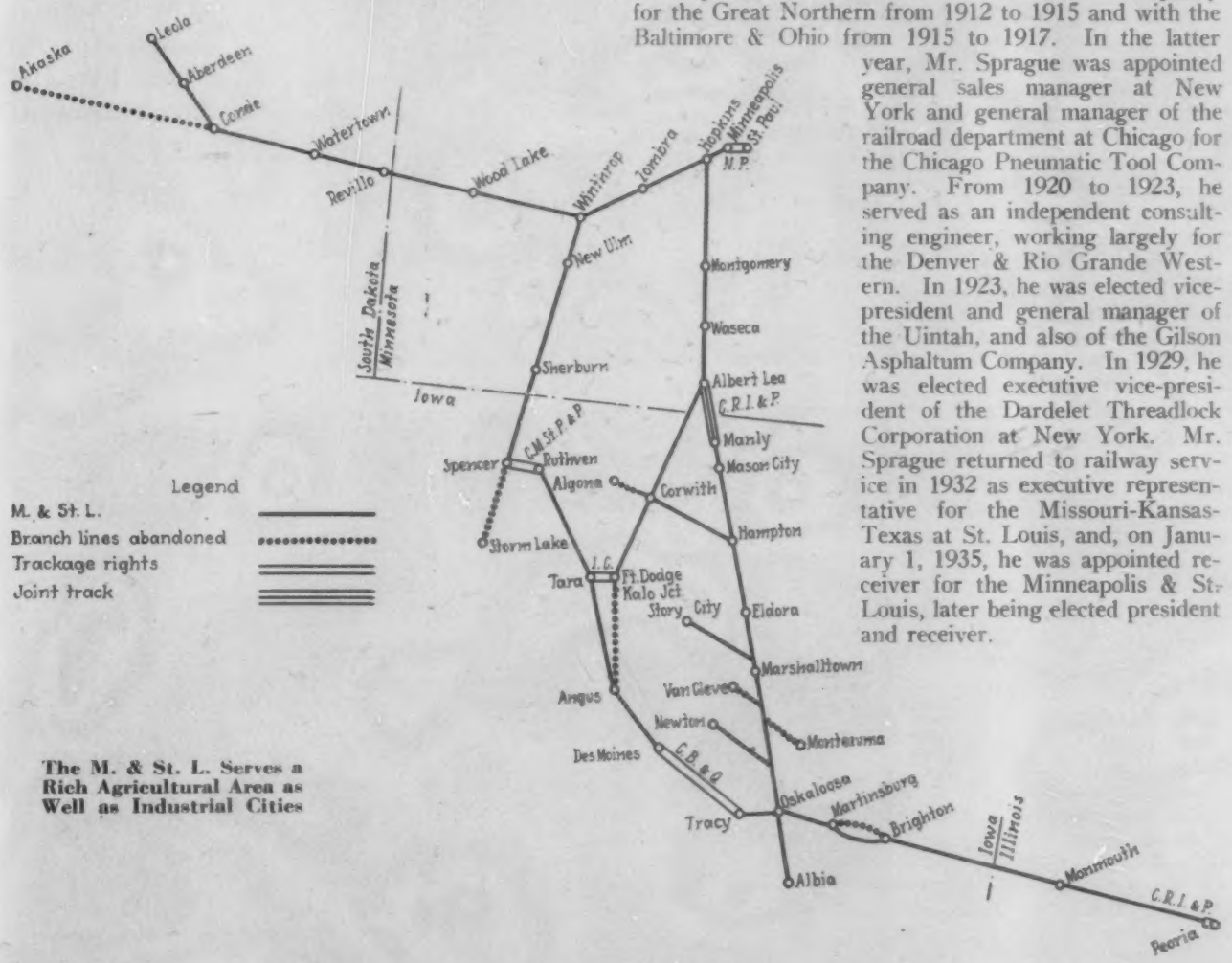
Since Mr. Sprague took charge of the railroad on January 1, 1935, the management of the property has been characterized by alert, forceful leadership on the part of the executive and department heads. Operating expenses were reduced through the abandonment of 210 miles of unprofitable branch lines and through the elimination of much passenger service. An aggressive, modern sales policy was adopted to secure traffic. Against the general trend, the M. & St. L. opened new off-line traffic offices in 1935 and 1936, on the theory that salesmen are needed most when the product is hardest to sell. In addition, every officer of the M. & St. L. was encouraged to become a salesman and an informal but nonetheless effective public relations campaign was instituted to rehabilitate the standing of the railway among shippers and receivers. Meanwhile the physical rehabilitation of the line was taking place, that has effected a marked improvement in roadway, motive power and equipment. A detailed description of the first five years of this program appeared in the *Railway Age* of June 8, 1940, page 1,000.

The M. & St. L. has no large war production plants or military encampments along its lines. However, it is contributing materially to the war effort by handling much important transcontinental and other bridge traffic in war products and raw materials to be converted for war use. Also, because of its lack of interfering passenger trains, it is in position to handle troop trains efficiently and promptly, and is doing so.

The results of the enlightened sales policy are reflected in the figures. The gross revenues showed a continuous drop from 1929 to only $7,514,180 in 1934. Under the new management, an increase of about $100,000 was shown in 1935. In 1936, as the new policies began to make themselves felt, the gross revenues rose to $8,955,364, or nearly a million and a half dollars more than in either 1934 or 1935. Drought in the territory served caused a drop back to $8,660,085 in 1937 but the trend has been steadily and uninterruptedly upward since then. In 1941, the total reached $10,836,233, and for the first five months of this year it was $5,216,942, an average of over one million dollars per month, which assures a sizeable increase over last year's total, which was the highest since 1930.

Mr. Sprague's Career

L. C. Sprague, who has been elected president of the new companies, was born in Serena, Ill., on September 29, 1885. He was educated in grade and night schools and is a graduate of the International Correspondence School in mechanical engineering. He entered railway service with the Chicago, Burlington & Quincy in 1899, and served successively as call boy, block operator, machinist apprentice, locomotive fireman and locomotive engineman. In 1911 and 1912, he served as locomotive expert and air brake instructor for the International Correspondence Schools, and served in the same capacity for the Great Northern from 1912 to 1915 and with the Baltimore & Ohio from 1915 to 1917. In the latter year, Mr. Sprague was appointed general sales manager at New York and general manager of the railroad department at Chicago for the Chicago Pneumatic Tool Company. From 1920 to 1923, he served as an independent consulting engineer, working largely for the Denver & Rio Grande Western. In 1923, he was elected vice-president and general manager of the Uintah, and also of the Gilson Asphaltum Company. In 1929, he was elected executive vice-president of the Dardelet Threadlock Corporation at New York. Mr. Sprague returned to railway service in 1932 as executive representative for the Missouri-Kansas-Texas at St. Louis, and, on January 1, 1935, he was appointed receiver for the Minneapolis & St. Louis, later being elected president and receiver.



The M. & St. L. Serves a Rich Agricultural Area as Well as Industrial Cities

Cadets at the Camp Lee, Va., Q.M.C. School Learn How to Stow Freight for Shipment

All Photographs Courtesy
Public Relations Office, Camp Lee, Va.

Dummy Cars Are Used for Instruction. TOP —Wood-Burning and Gasoline Ranges in a Kitchen Car. MIDDLE—A Couple of Stationary Box Cars. BOTTOM —Blocking Autos on Flat Cars

Six Months' Railway Buying

CLASS I railroads received approximately $70,073,000 of materials, other than fuel, during June. This was an increase of 2 per cent over June, 1941, but a decline of approximately $3,475,000, or 4.7 per cent, from May, 1942.

During the first half of the year, Class I railroads received $445,713,000 of materials, exclusive of fuel, and ordered approximately $140,000,000 of new locomotives and cars from contract builders,—bringing the purchases from manufacturers to $585,713,000. With fuel added, the total for the first half of the year was $786,840,000, as estimated by the *Railway Age* from special reports received from the carriers. Approximately $202,000,000 of new equipment was installed on the Class I railroads during the first six months, consisting of approximately $56,000,000 of locomotives and $146,000,000 of freight cars.

Materials, exclusive of fuel, received by Class I railroads during the first six months' period reflected a gain of 20 per cent over the corresponding total of the first six months of 1941, a gain of 50 per cent over the total for the same period of 1940, and an increase of about 90 per cent over the total for the corresponding period of 1939. The purchases of materials and equipment, exclusive of fuel, from manufacturers in the first six months' period, amounting to approximately $585,713,000, were 13 per cent smaller than in the same period of 1941, but showed an increase of 63 per cent over the same period of 1940 and an increase of 104 per cent over the same period of 1939.

The aggregate value of materials and supplies, exclusive of fuel, in stock on the Class I railroads at the end of June, amounting to approximately $475,782,000, was about 39 per cent larger than on June 30, 1941, and about 50 per cent larger than on June 30, 1940; while the inventory of materials, exclusive of rail and cross ties, as well as fuel, at the end of June this year was approximately one per cent greater than at the end of May and about 4 per cent greater than at the end of March.

Railway Purchases—Supplies and Equipment—Six Months

	Materials received from mfrs.	Equipment ordered from mfrs.	Total from mfrs.	Fuel	Total including fuel
	(000)	(000)	(000)	(000)	(000)
1939	$236,364	$49,759	$286,123	$123,342	$409,465
1940	296,833	60,278	357,111	134,663	491,774
1941	371,340	301,144	672,484	158,374	830,858
1942*	445,713	140,000	585,713	201,127	786,840

* Subject to revision.

Materials and Supplies Received—Class I Railroads

	Fuel	Rail	Cross ties	Other material	Total	Total less fuel
	(000)	(000)	(000)	(000)	(000)	(000)
Jan.	$27,261	$3,464	$3,472	$45,457	$79,654	$52,393
Feb.	27,901	5,297	3,514	43,467	80,179	52,278
Mar.	31,121	5,168	4,087	54,070	94,446	63,325
Apr.	19,203	4,857	4,365	55,444	83,869	64,666
May	25,550	6,196	4,369	59,492	95,607	70,057
June	27,338	4,868	4,071	59,682	95,959	68,621
6 mos.	$158,374	$29,850	$23,878	$317,612	$529,714	$371,340
1942*						
Jan.	$32,408	$2,523	$5,054	$68,006	$107,991	$75,583
Feb.	31,560	3,132	4,994	62,251	101,937	70,377
Mar.	33,567	3,094	6,330	70,085	113,076	79,509
Apr.	34,755	4,785	6,374	65,464	111,378	76,623
May	34,118	5,489	6,382	61,677	107,666	73,548
June	34,719	4,562	6,386	59,125	104,792	70,073
6 mos.	$201,127	$23,585	$35,520	$386,608	$646,840	$445,713

* Subject to revision.

Materials in Stock—Class I Railroads*

	Fuel	Rail—New and S. H.	Cross ties	Stores stock	Scrap	Total
	(000)	(000)	(000)	(000)	(000)	(000)
Jan. 1, 1942	$40,040	$23,986	$48,426	$338,839	$8,808	$460,099
Feb. 1, 1942	40,427	22,705	60,944	346,458	10,941	481,475
Mar. 1, 1942	40,198	23,886	64,290	360,946	10,489	499,809
Apr. 1, 1942	42,116	23,737	67,873	376,035	9,829	519,590
May 1, 1942	44,477	23,092	66,481	384,790	10,000	528,840
June 1, 1942	45,327	23,488	63,376	390,945	10,554	533,690
July 1, 1942	47,818	23,098	58,869	393,815	10,830	534,430
July 1, 1941	25,991	24,389	51,551	266,019	9,669	377,619
July 1, 1940	22,310	35,138	57,452	225,066	11,371	351,337

* Subject to revision.

Communications . . .

Take Counsel Now to Protect Railroads' Future

TOWNSEND, MASS.

TO THE EDITOR:

When the war is over the country's transportation system will face a complete overhaul. The place of the railroads in the new system will be quite different from its present and former status. When the automobile first appeared, and for a long time after it had arrived, the railroads individually and blindly fought its competition when dispassionate study of its uses would have saved much waste and some bankruptcy. The same situation existed when the airplane came into being as a practical machine after the last war.

The future system will have a place for the railroads, highways, airways, pipe lines, and waterways. The railroads can obtain a knowledge of their proper place and save much useless expense in the future only if they now set up a strong compact organization to study this problem in their common interest, instead of individually butting their heads against a stone wall as they have done in the past.

An overall plan will undoubtedly be forthcoming from the government, made mostly by theorists. To protect their own interests the railroads should have the facts to insure their rightful place, and prevent a losing fight against traffic loss that such a study might show to be inevitable.

L. G. COLEMAN.

Railfans Help in Emergency

BUFFALO, N. Y.

TO THE EDITOR:

May I direct your attention to some of the benefits accruing to the railroads because of the efforts of the nation's railfans, both today and in normal times?

In 1941 the roads were still advertising for passenger traffic. At that time railfans of the Buffalo, N. Y., area alone were responsible for thousands of dollars of passenger revenue, which the roads otherwise would not have had. Only a small part of this came directly from club activities. A larger part came from the purchase of transportation by members of railfan clubs traveling individually and in small groups; most members took railroad vacations and spent many weekends exploring branch lines.

But most of the additional revenue came from the general public. Persons contemplating a trip would not even have considered train travel, had they not been acquainted with club members. Sometimes the fans directly recommended train service; sometimes they answered questions which would not have been asked of ticket officers due to inertia and habit; sometimes just the realization that there were people who were convinced of the desirability of train travel caused potential travelers to investigate schedules and rates.

Any railfan can name examples of this sort of indirect adver-

tising. I recall one time that a woman had made up her mind to use a bus from Buffalo to New York City, in the belief that she could not afford a rail ticket; her idea of the fare was the price of first-class travel plus berth, and she did not believe that the fare I quoted was actually round-trip coach. Another time, a person was prepared to drive several hundred miles to a distant point because many years ago a rail trip had taken 12 hours and the equipment had been bad; when told that 8½ hours was now the running time and that air-conditioned coaches were carried, he at once changed his mind and went by train.

It isn't just poor salesmanship which permits these misconceptions to exist; all the advertising in the world can't equal the power of personal contact, and there is a limit to what a passenger office can do.

Today, the situation is different. Railroads are not permitted to advertise services to any great degree, by government mandate. Many lines are running full trains, are adding cars and sections where possible, and yet are carrying standees. But, railfans are still of great value, for they are unofficially assisting in directing the heavy traffic. I personally have witnessed a situation in which two roads carry passengers between two large cities on identical schedules. One road has a reserved seat train; the other has reclining seat coaches, parlor cars, a diner and an observation coach. The former was sold out one Sunday not long ago, as usual. I counted 86 passengers in the three coaches of the other train that same day.

Such situations are not uncommon. Habit is a powerful thing and travelers tend to continue riding the best known route and neglect entirely lesser known competitors, even though the latter have revised their service to compare favorably. Examples of this sort of thing are not hard to find—there are the P. R. R. and the B. & O.; the N. Y. C. and the Nickel Plate; the M. C. and the WAB-P. R. R.

When a fan suggests that a friend ride the lesser known route, everyone benefits. The passenger has more room and better equipment; the road he uses fills its train (and certain statements to the contrary, there are trains and trains running half empty these days on many a main line); the road he would ordinarily use avoids giving a bad impression of its service through use of non-air-conditioned, hard-seat coaches, etc.

Similarly, the railfan can tell his friends what days are best to travel; the answer is not the same on all lines. He can get his friends to reserve space early, to pick it up early, and to cancel it if necessary.

All in all, the railfan is an asset today, in these busy times, just as he was in the past. Most passenger departments seem to realize this, and are entirely reasonable in their attitude to reasonable railfans. There are a few operating men, however, who have never thought of the situation in just this light, and it is my hope that this letter may bring the matter to their attention.

William C. Kessel,
Vice-President, Publicity, Buffalo Chapter,
National Railway Historical Society

Designers—Please Note!

Washington, D. C.

To the Editor:

Apropos of the article in your September 5 issue concerning new Union Pacific cabooses designed with the help of conductors and brakemen: An exasperated dining car steward said to me, "I wish the man who located the steam-heat valve in this dining car had to move the women away from that table to operate it, as I do at times! An idiot should know enough to place it where it could be reached without disturbing patrons."

I was talking with the head janitor in one of the great union stations. He said, "The architect who designed this station couldn't have made it harder or more expensive to keep clean if he had tried." It was after midnight, and the cleaning force was at work in the concourse. "The sumps are inaccessible, and we have to sweep that water to the other end to get rid of it."

To a passenger representative of my acquaintance I observed that a new station was attractive. He said, "If a passenger man had had an opportunity to check the plans from the point of view of passengers coming in through the several entrances, he could have saved patrons many a step and considerable time where both tickets and baggage are concerned—at times it means missing a train."

The Union Pacific is on sound ground. A conveniently arranged, comfortable caboose, with properly designed trucks prevents fatigue and facilitates the work of both conductor and rear brakeman, while the screens and shades will be conducive to more adequate rest where the cars are used for this purpose. It pays to get the viewpoint of the men who use equipment and facilities, and designers do well to make this a first step.

Edward H. DeGroot, Jr.

New Books . . .

Vermont Central—Central Vermont. 104 pages. 9 in. by 6 in. Bound in paper. Published by the Railway & Locomotive Historical Society, Harvard Business School, Boston, Mass. Price $1 to members, $2 to non-members.

Since this book includes a survey of the history not only of the Central Vermont, as that road exists today, but also of the Rutland, which at one time was included in the same system, its scope is somewhat wider than its title might suggest. Moreover, a dozen or more short lines, not only in Vermont but in other New England states, and in northern New York and Canada as well, were absorbed or controlled by these two roads, and their beginnings and frequently involved traffic and corporate relationships are also traced in this informative contribution to railroad history.

As is usual with this series of special publications of the Railway & Locomotive Historical Society, the book includes detailed tabulations of the available information about all known locomotives owned by or used on the Central Vermont, the Rutland, and the various short lines that came under the management of those roads. These tabulations were prepared by the experienced hand of Charles E. Fisher, president of the society and editor of its publications, who also contributed the brief but comprehensive survey of the history of the New London Northern up to the time it was taken over by the Central Vermont.

The principal article in the book is by Edward Hungerford, well known for his colorful writings in the field of railroad history. It deals with the Central Vermont—its beginnings as the Vermont Central, the ambitions of its promoters and their conflicts with other interests seeking to develop through rail routes between Boston and the West, and the many corporate marriages and divorces that marked that road's relationships with other lines—a story enriched by its association with the careers and personalities of some of the individuals who contributed to the development of Vermont's railroads.

The article on the Rutland was written by David Sargent, Jr., author of other studies in the history of early New England railroads, while the growth of the Ogdensburg & Lake Champlain during its existence as an independent line is described by Lawrence Doherty, a contributor to other volumes in this series. The history of the Vermont railroads has, of course, already been outlined in Professor Baker's "Formation of the New England Railroad Systems," but their story is told here with more detail, and with more emphasis on the personalities of their builders and managers. There are 24 illustrations. An appendix includes a list of Central Vermont "graduates" who have attained important positions on other American railroads, including no less than seven railroad presidents.

Shippers Can Help Switching Crews—In a leaflet recently published the Pennsylvania suggests 12 ways in which shippers' co-operation will help the railroads to reduce the time lost in terminal movements of freight cars, a phase of operations which some shippers have been inclined to find fault with. Speedier handling will result, for example, if shippers can load cars in groups according to the direction or the route for which they are bound, and if they can adjust delivery programs on standing orders so that blocks of cars to a given destination can be handled together at intervals instead of sending them out individually on a daily schedule.

Railroads-in-War News

Tank Car Loadings Increase Slightly

Carriers haul 824,850 barrels daily to east coast in week ending September 5

Tank car shipments of oil to the east coast averaged 824,850 barrels daily during the week ended September 5, according to an announcement by Petroleum Coordinator for War Harold L. Ickes. This was an increase of 1,590 barrels daily over the volume moved in the previous week, when car loadings averaged 823,260 barrels daily.

In handling this movement the 37 oil companies loaded 27,495 cars. On the basis of an average of 210 barrels per car, these cars carried the equivalent of 5,773,950 barrels of petroleum and petroleum products during the week.

At the same time the Office of Defense Transportation announced that a total of 8,400 tank cars have been released for the transportation of petroleum into the eastern seaboard area as a result of the ODT order restricting the use of tank cars in short hauls. Meanwhile, Jesse Jones, Secretary of Commerce, announced that the Defense Plant Corporation, upon the recommendation of the Petroleum Coordinator for War, has agreed to finance the construction of two pipelines designed to further alleviate the eastern petroleum shortage.

The lines will be eight inches in diameter and will extend from Greensboro, N. C., to Richmond, Va., 175 miles; and from Tiffin, Ohio, to a point near Akron, 82 miles. The first line will be an extension of the Plantation Pipe Line which runs from Baton Rouge, La., to Greensboro, N. C., while the other line will connect two existing lines.

Also, this week President Roosevelt asked Congress to permit him to use existing rivers and harbors appropriations to the extent of $6,485,000 to carry out the enlargement and deepening of the Gulf intracoastal waterway from Apalachee Bay, Fla., to Corpus Christi, Tex. Authority to do this work was contained in the Florida pipe line bill which became law on July 23, 1942.

The Interstate Commerce Commission has granted the railroads a one-year extension of the blanket fourth section relief they now have in connection with the emergency rate reductions on petroleum and petroleum products published a year ago because of the emergency conditions to the war.

It is understood that the railroads expect to file tariffs effective November 1.

Lash Returns to C.N.R.

G. Herbert Lash, director of the Public Information Bureau of Canada, with headquarters at Ottawa, Ont., has resigned from the bureau and will return to the publicity department of the Canadian National. Claude Melancon, associate director of the bureau, who is also on loan from the Canadian National, has also resigned and is expected to be employed by the government in some branch apart from the information bureau.

F. A. Silver Becomes ODT's Assistant General Counsel

Francis A. Silver, chief enforcement attorney of the Interstate Commerce Commission's Bureau of Motor Carriers, has been appointed assistant general counsel of the Office of Defense Transportation.

Would Give Henderson Veto on All Rate Increases

Senator Norris, Independent of Nebraska, has introduced S. 2767, to provide that rates charged by any common carrier or public utility shall not be increased without the consent of the price administrator. Under the present price control law, rates of common carriers are exempt, although the Office of Price Administration has jurisdiction over contract-carrier rates.

Will Study Use of Women by British Transport Agencies

Dorothy M. Sells, chief of the Personnel Supply Section of the Office of Defense Transportation's Division of Transport Personnel, left on September 15 for London, Eng., where she will make a first-hand study of the ways in which women are helping to meet personnel shortages in the British transportation industry. The survey is expected to extend over a two-months period.

Exclusions from ODT's Permit System for Export Freight

Provisions of the Office of Defense Transportation's General Order No. 16, which covers the permit system for export freight, has been suspended with respect to property consigned to the British Aviation Supply Depot, Philadelphia, Pa., the Procurement Division of the Treasury in New York, and all petroleum and petroleum products moving to port areas for offshore destinations. The suspension (Exception Order ODT No. 16-2) became effective September 12.

Railroads Giving Steel for Steel

Return four tons of scrap for each ton of new, says Aitchison

For every five tons of new steel the railroads use, they return to the mills four tons of iron and steel scrap, Clyde B. Aitchison, chairman of the Interstate Commerce Commission, declared during a round-table radio discussion in Washington, D. C., September 17.

According to Commissioner Aitchison, the railroads are the nation's prime source of scrap metal, ordinarily originating about one-sixth of all commercial scrap metal. Most of this scrap, he stated, is iron and steel needed to feed the steel mills. In the nation-wide campaign to collect scrap that can be used in the manufacture of war materials, Commissioner Aitchison said, "the railroads have taken the lead, and are doing a most remarkable job."

"As a result of their intensified effort," the Commissioner continued, "the railroads have salvaged hundreds of thousands of tons of scrap metal and huge quantities of other usable scrap. One railroad has increased its scrap production by 25 per cent, and this is typical of what is being done on every railroad throughout the country."

Pointing out that the salvaging of scrap is not the only thing the railroads are doing to conserve critical materials, Commissioner Aitchison said: "They are substituting the less critical for the more critical materials, and are changing designs in order to reduce or eliminate the need for critical materials. They are also getting the fullest possible use out of what they have, and are reclaiming and restoring worn materials."

As an example of this, William White, president of the Delaware, Lackawanna & Western, cited what the railroads are doing to conserve steel. "Even before America entered the war," Mr. White said, "the railroads took definite action to save steel. They limited freight car designs for the duration, and began to use narrow plates of steel in all types of cars except tank cars instead of the scarcer plates of standard width. They also arranged to use wood instead of steel in certain parts of closed and open top cars. Although the amount of steel thus saved varies with the different types, the average is well over a ton per car. Much steel, too, is being saved by careful and scientific reclamation."

The railroads have been intensely active

(*Continued on page 458*)

Train Limit Laws Out for Duration

I. C. C. service order directs railroads to disregard state restrictions

Railroads have been directed by the Interstate Commerce Commission to disregard state train-limit laws "when necessary for the prompt movement of freight and the clearing or avoidance of congestion by either freight or passenger trains." The directive, effective September 15, came in Service Order No. 85, which "being based upon conditions of war emergency, shall not constitute a precedent for peace time operations"; it is effective for the period of the war, "unless sooner terminated by subsequent order of the commission."

The order was directed to state laws "limiting the length of railroad freight trains to not more than one-half mile and limiting the number of freight cars in a railroad freight train to 70 cars, and limiting the number of cars in a railroad passenger train to 14 or 16." It noted that trains exceeding such limits "may be operated in accordance with safety standards now applicable," adding that their operation "will facilitate the free flow of traffic during the present emergency." It is understood that the commission acted upon its own initiative, although the Office of Defense Transportation was in agreement with it. Only Oklahoma and Arizona have train-limit laws in effect.

Issuance of the order was anticipated in the September 15 issue of "Labor," organ of the railroad brotherhoods, which said it had been submitted to union officers by Commissioner J. Monroe Johnson. This, as "Labor" put it, "brought vigorous objections which Commissioner Johnson tried to placate by stating that it would apply only to the states of Arizona and Oklahoma, and that the laws would become effective again after the war."

ODT Issues Four Additional Bus Coordination Orders

Four additional special orders co-ordinating bus services have been issued by the Office of Defense Transportation. The orders were signed by Assistant Director C. D. Young, who was acting director at the time.

Special Order ODT No. B-22 directed Dixie Greyhound Lines, Inc., and Mo-Ark Coach Lines, Inc., each to eliminate a daily schedule between Florence, Ala., and Corinth, Miss., and to stagger service between those points. The reduction in scheduled service is 6,960 miles monthly.

Special Order ODT No. B-23 directed the West Ridge Transportation Company, Buffalo & Erie Coach Corporation and Central Greyhound Lines, Inc., to stagger schedules, interchange tickets and use terminals jointly on their routes between Kane, Pa., and Erie, Pa., and between Ashtabula, O., and Buffalo, N. Y.

Special Order ODT No. B-24 ordered the Boston & Maine Transportation Company to suspend service between Springfield, Mass., and Brattleboro, Vt., and the Vermont Transit Company, Inc., to divert two of its daily round trips between those cities over the abandoned route. The saving in scheduled service will be 2,880 miles a month.

Special Order ODT No. B-25 directed Southeastern Greyhound Lines to withdraw its two daily round trips between Huntington, W. Va., and Ashland, Ky., leaving the route to be served by the 10 daily round trip schedules of the Atlantic Greyhound Corporation. The saving in scheduled service will be 2,160 miles a month.

Citizen's Handbook for War

Planned to suggest ways in which people at home, in their spare time and going about their daily tasks, can "get in up to the shoulders" in helping to win the war, a new booklet is being widely distributed by the Office of Civilian Defense. Called "What Can I Do: The Citizen's Handbook for War," this publication, illustrated with 64 drawings by Gluyas Williams, suggests some of the citizen's general responsibilities in wartime—safety precautions, conservation, scotching rumors, and paying taxes, for example—and then offers more specific ideas along these lines to individuals in 73 different occupations.

"Frustrated" Freight at Gulf Ports

Acting upon petition of railroads serving Gulf of Mexico ports, the Interstate Commerce Commission has issued an order prescribing a basis for the adjustment of charges on export freight in storage in cars or on railroad premises when such freight is moved back to interior points in compliance with orders of the Office of Defense Transportation. The freight involved is that which was destined to foreign ports now occupied by enemy forces; and Director Eastman of ODT sometime ago authorized Director Boatner of the Division of Railway Transport to require that it be moved when necessary to relieve congestion at the ports.

First Information Office for Over-the-Road Truckers

The first order approving a joint-action plan submitted by motor common carriers engaged in over-the-road operations was issued September 11 by the Office of Defense Transportation. It involves four Midwestern carriers of household goods—the Aero Mayflower Transit Company of Indianapolis, Ind., the Greyvan Lines, Inc., Chicago, the United Van Lines, Inc., St. Louis, Mo., and the North American Van Lines, Cleveland, Ohio; and authorizes those companies to establish in Chicago a joint-information office, which will enable the carriers to exchange shipments and otherwise "facilitate the movement of household goods." The order (Supplemental Order ODT No. 3 Revised-1) left the way open for participation in the joint-action plan by other common carriers transporting household goods by motor truck.

Gormley Sees 15% Traffic Rise in '43

Whether railroads can handle it all is for materials allocators to decide

Railroad passenger and freight traffic may increase approximately 15 per cent in 1943, M. J. Gormley, executive assistant of the Association of American Railroads, predicted at Toledo on September 16 in an address before the Great Lakes Regional Advisory Board.

"There is every indication that traffic will continue to rise next year," Mr. Gormley said, "but that the monthly rate of increase will not be as great as in 1942. War production is certain to increase. Troop movements will increase as our Army and Navy are enlarged. Passenger business will go up as the use of rubber-tired and gasoline-driven vehicles decreases. The railroads will continue to handle such unaccustomed loads as the oil movement to the East and the all-rail movement of coal into New England. On the other hand, civilian production will probably fall to minimum levels in 1943."

Mr. Gormley estimated that railroad freight traffic, as measured by the number of tons hauled one mile, will be about 30 per cent more this year than it was in 1941, and that railroad passenger business, as measured by the number of passengers carried one mile, will be approximately 50 per cent greater this year than it was in 1941.

Whether the railroads will be able to handle the increased loads, the speaker said, depends largely on how much additional equipment they will have with which to meet the demands.

Pointing out that the mass production of war materials is of no value unless they can be transported to where they are needed, Mr. Gormley urged:

"Let us not make the same mistake that Hitler made in neglecting Germany's railroads. Now, according to newspaper correspondents who recently returned from Germany, that country faces a serious breakdown of its railroads, and the transportation situation is becoming a genuine threat to the military effort of the Reich.

"Let us not be led to believe that because the railroads have been able to do such an outstanding job with their present equipment, they can handle substantial increases in traffic without adding cars and locomotives. If the materials for them and for necessary maintenance and repair of the present plant can be made available—and it is vital that they should be—the railroads will continue performing the same sort of transportation service that they have since war began."

Answering those who have asked why the railroads did not buy more cars and locomotives during the several years before America entered the war, Mr. Gormley maintained that "the same question might be raised as to why more ships and tanks and guns were not built then."

"Actually," he continued," the railroads

did add enough new equipment during those years to keep pace with every transportation demand that was foreseen, and a good many demands that were not foreseen. Ever since war broke out in Europe in September, 1939, the railroads have been increasing their carrying capacity. By August 1, 1942, they had 256,237 more serviceable freight cars and 4,364 more serviceable locomotives than they had on September 1, 1939."

Commenting on the order of the Office of Defense Transportation to compel maximum loading of freight cars as far as practicable, Mr. Gormley observed that it will have "little effect on the many shippers who have been accustomed to loading cars heavily, but it is likely to inconvenience some who have not been doing this."

"However," he added, "it is not asking too much of a shipper to load his cars more heavily if, by doing so, he helps to maintain the transportation service that is so vital to the war effort."

The effectiveness of the order, Mr. Gormley explained, depends a great deal on co-operation because a large measure of the order's control is in the hands of shippers by reasons of its exceptions.

"I urge shippers not to take advantage of these exceptions simply because they are available," Mr. Gormley said. "Every car should be loaded to maximum capacity whenever possible."

L. M. Betts, of Washington, D. C., manager of the Railroad Relations Section of the Car Service Division of the Association of American Railroads, told the shippers' meeting that the railroads have successfully met military and commercial demands for transportation.

"So far," he said, "the railroads have moved every ton of freight tendered them to haul. They have carried every person who wished to travel by rail to where he wanted to go. They have met every transportation emergency."

Will Direct Army's Canadian and Alaskan Rail and Road Building

The War Department has established a Northwest Service Command, directing Army highway and railroad building activities, and supply and maintenance services in western Canada and Alaska, with headquarters at Whitehorse, Yukon Territory, Can.

Colonel James A. O'Connor, Corps of Engineers, has been assigned to command the new service command, with Colonel Kenneth B. Bush, Adjutant General's Department, Chief of Staff. Colonel O'Connor will be responsible "for all Army of the United States activities in the Canadian provinces of British Columbia and Alberta and territories of Yukon and Mackenzie, together with operation, supply, and construction activities connected with the White Pass and Yukon railways, and the highway from Whitehorse to Fairbanks, Alaska, and base installations in Fairbanks and Skagway, Alaska."

"The primary mission of the command," the War Department announcement went on, "is to direct and co-ordinate construction, maintenance and supply activities over highways, railways, inland water routes, air routes and pipe lines serving the United States forces in this area, except for those supplies peculiar to the Army Air Forces."

Shafter Named Chairman of WPB Transportation Committee

A. F. Shafter, acting chairman of the War Production Board's Transportation Committee, has been appointed chairman, succeeding Edgar B. Stern, who has been granted an indefinite leave of absence for reasons of health. Mr. Shafter, secretary-treasurer of the United States Manufacturing Company, Decatur, Ill., came to WPB in May, as special assistant to the chief of the Bureau of Industry Branches, specializing in transportation problems.

As noted in the *Railway Age* of May 30, page 1090, the Transportation Committee was formed to obtain information from the various divisions of WPB in order to anticipate transportation requirements and to make recommendations with respect to preferential movement of traffic.

Labor Organizations to Continue Search for Scrap

The Railway Labor Executives' Association, meeting in Washington, D. C., last week decided to call upon field officers and members of its affiliates to continue in intensified fashion the search for scrap which was launched several weeks ago by some of the unions. Reports from labor circles indicate that R.L.E.A. expects its campaign to turn up much rail and other scrap in abandoned lines and unused tracks, thereby lessening the need for requisitioning by the government of branch lines now in operation.

In the latter connection, Donald M. Nelson, chairman of the War Production Board, recently told a conference of newspaper publishers that the government must continue taking the rails on lines "that are not contributing to the war effort." Mr. Nelson recognized that such action always brings "a holler" from communities involved and from congressmen and senators, but he insisted that it must go on.

In any event R.L.E.A. has submitted to WPB a report on idle trackage discovered up to now by railroad employees, and it expects to continue gathering such information.

Conference on Distribution To Hear Eastman

The recently announced list of speakers who will address the fourteenth Conference on Distribution, to be held October 5 and 6 at the Hotel Statler, Boston, Mass., includes representatives of many branches of government and industry. These speeches, and the discussions that accompany them, are to deal with both the current and the post-war place of distribution in the economic system. Transportation Under National Defense is the subject to be discussed by ODT Director Joseph B. Eastman.

David C. Prince, vice-president of General Electric Co., and Robert R. Nathan, chairman of the planning committee of the War Production Board, will be among those to talk on aspects of post-war planning. The British Minister to the United States, Harold Butler, will speak on War and Industry in Britain, and others on the program are Wayne C. Taylor, U. S. Undersecretary of Commerce, and Donald K. David, dean of the Harvard Graduate School of Business Administration. A dozen or more business editors will participate in one session, to be devoted to a discussion titled What's Ahead for Distribution?

Roosevelt Doubts Seaway Will Be Built Now

President Roosevelt indicated at his press conference on September 15 that the St. Lawrence power and seaway project will probably not be built during the present emergency. He said in reply to a question that due to the shortage of materials and labor and the fact that it would take at least three years to complete the project, it was a highly debatable proposition as to whether or not it should be built during the present war.

He stressed the power phase of the program and declared that the power to be generated will be very much needed before the war is over. He went on to predict a power shortage in northern New York and New England, and reminded his hearers that if Congress had authorized the project when he had asked for it, it could have been half finished by now.

Canada's Railways Are Meeting All Demands

Canadian railways will be able to handle their growing freight and passenger traffic without further extension of transportation rationing if conditions affecting transportation do not get worse, R. C. Vaughn, president of the Canadian National, said at Montreal this week at a press conference upon his return from a Dominion-wide inspection trip.

"We are making full use of our equipment, freight trains are dispatched faster along the lines and all carry a full tonnage," Mr. Vaughn went on to say. "The day has not yet come when we have to say 'Sorry, cannot handle.'

"Of course," he continued, "we cannot get more passenger cars, and troops come first, but apart from certain curtailment of special fares as previously announced by the transport administrator, travel rationing today is not a necessity.

"We are hoping to get some new freight equipment. Many more engines, some reconditioned, are in service today than in 1939."

Nelson "Tough" on Branch Line Requisitions

"Rails which once carried produce and cattle over the Elkhart & Santa Fe line from Boise City, Okla., to Farley, N. M., will shortly go to war and carry steel for the manufacture of munitions, guns, torpedoes and naval stores to fight the Axis powers," said a September 16 War Production Board statement issued following a conference between Senator Carl A. Hatch of New Mexico, and Donald M. Nelson, chairman of WPB. The statement added that citizens who live along the line "will

have the satisfaction of knowing that, while the loss of the line may bring certain hardships, it will facilitate the flow of supply which men on the fighting front will have to win this war."

Mr. Nelson asked Senator Hatch to convey for him to such citizens this message: "Rails are vitally needed by our armed services; the only way in which we can procure these rails quickly enough to keep supplies moving, is to requisition the tracks of railroads which are not now deemed essential to the movement of troops and war supplies. The Elkhart & Santa Fe line involved is one of many rail lines which are being placed into the war effort through this means. In fact, these rails may be carrying much needed supplies to such great battleships as the New Mexico, which carries the honored name of your state."

Prior to acquisition of the line for war use, WPB said, citizens of the three counties served by the road had protested an action by Atchison, Topeka & Santa Fe to abandon the line. Prior to final disposition of the case, the government stepped in and took over the road. After the government action, the Santa Fe requested transfer of the rails to other of their lines. This was refused by WPB.

"While there may be need for rails on other of the Santa Fe lines to carry war goods, nevertheless, the needs of our armed forces are greater," Mr. Nelson said. "The Army and Navy come first. Every day counts in procuring necessary rails for our armed services. Three months—or even three days delay now, can mean similar delay in the shipment of critical war material which can spell success or failure where the lives of our boys in the Army, Navy and Air Force are concerned. Of course, one must consider the delay and inconvenience which might be experienced when local citizens have to haul their cattle and produce some miles further to a railroad line, because of an action like this. On the other hand, I sincerely believe that when the citizens of Oklahoma and New Mexico realize how vital this track is to the war effort, they will agree with me that if the use of this line for war purpose saves the life of even one New Mexico or Oklahoma boy, any personal sacrifice on their part will not have been in vain.

"These rails are urgently needed in naval supply depots of the Pacific Coast, such as the destroyer base of San Diego, and the naval air station at Alameda. The tracks that once carried New Mexico produce and cattle, will enable the Navy to bring in extra freight loads of needed equipment and supplies to provision ships and planes guarding the Pacific. In addition, a large amount of the 980,000 feet of track which the road will yield, will also be used to speed to completion the giant new arsenal at McAllister, Okla."

Railroads Giving Steel for Steel

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in reclamation work, Mr. White stated, and have been gathering up, reconditioning and putting to use materials of all sorts, ranging from the magazines and newspapers which passengers leave in the cars to electrical apparatus, equipment and machine parts.

In describing how a large amount of steel is saved by reclamation, the D. L. & W. president said that when ends of rail become battered, they are sawed off and re-drilled, and those with chipped or worn ends are built up in place in the track by welding. In both cases, he explained, practically the tonnage of a new rail is saved. "And," he went on, "for every foot of new rail laid, the railroads are releasing nine-tenths of a foot of old rail to be laid again in switch tracks serving camps or war plants or for other uses." Many railroad shops have been converted in whole or in part to turn out war work, Mr. White declared, and the railroad supply industry has also taken on war production.

Among the railroads' other contributions to the war effort, R. V. Fletcher, vice-president of the Association of American Railroads, said, is their lending or leasing equipment and facilities of various kinds to the government. "These things," Mr. Fletcher continued, "include machinery, tools and steamships and other floating equipment, and all types of port terminal facilities. The railroads have also made available warehouse and open track space for Army and Navy storage or other war purposes. Considerable space in railroad stations throughout the country is being devoted to services helpful to the military personnel and to the promotion of the sale

Trucks Are Helping the Railroads, Says Boatner

The truck industry is of material help to the railroads in attaining their excellent record of performance—so V. V. Boatner, director of railway transport in the ODT, told the New England Shippers' Advisory Board in a September 15 address.

"I have two associate directors with staffs exploring the possibilities in the field of rail-truck co-ordination," Mr. Boatner said. "I do not think it is generally understood that one of the major reasons for the railroads being able to surpass all previous records is the part that is being played by the trucking industry. General Order ODT No. 1 owes considerable of its vitality to the truck. The terminal and short-haul traffic carried by trucks has relieved the railroads of performing the equivalent of a drayage service in many communities. This character of movement has been greatly reduced because the trucking industry long since took over a large part of it. There remains, however, a considerable amount of short-haul and intra-city traffic in the large cities that moves by rail.

"We must get each agency to render the service it is best fitted for and can perform with the minimum use of facilities.

"Let me illustrate what this means: A railroad car in intra-terminal service is ordered by an industry. It is secured from the classification yard during the day and usually switched to the industry at night or in the early morning, consuming a car day. Two days are used for loading and two days for movement back to the yard and to placement at the destination industry. Two days more are required for unloading, and one day to return to the yard for service. This means an average time of eight days. One ten-ton truck in one day can perform this intra-terminal service and thereby release the freight car."

The speaker credited ODT Order No. 1, heavier loading of cars and reducing the ratio of bad orders, with adding 151,000 cars to the effective supply. "Had we loaded and unloaded cars in the first eight months of 1942 as was actually done in the same period of 1941," he said, "the loadings for the week ending August 29, instead of being about 900,000, would have been approximately 1,070,000 cars.

"The railroads have performed an equally excellent job in the use of locomotives. Reduction of the number of unserviceable engines from 11.7 per cent of the total in August, 1941, to roundly 7 per cent in August, 1942, together with an increase of 7 per cent in the trainload, has made available about 3,500 more locomotives than were utilized in 1941. Thus, by the net addition of only 23,000, or 1.5 per cent, new freight cars to the supply and about 200, or .5 per cent, new road locomotives, the increased utilization made possible by the combined efforts of all of us has enabled the railroads to carry a 35 per cent heavier traffic load in net ton-miles than in 1941, the previous best ton-mile performance record.

"Have we exhausted the possibilities of increased utilization of facilities as far as the railroads are concerned? The answer is, I do not think we have yet scraped the bottom of the barrel. General Order ODT No. 18, which becomes effective October 15, makes it mandatory, with certain modifications and exceptions, to load cars to capacity. This will add additional cars to the supply but not to the extent of some of the other steps taken."

of War Bonds and War Savings Stamps."

Mr. Fletcher called attention to the fact that the railroad industry was among the first to adopt the payroll deduction plan, and that thousands of railroad employees are already in the Army and Navy. Although men who have been or can be trained usually replace those who leave the railroads for the armed services, Mr. Fletcher said, women are taking over the jobs in a good many instances. At the present time, he stated, more than 40,000 women are now working for American railroads, and more are being added to the railroad payrolls every day.

In discussing the payment of taxes to help finance the war, Mr. Fletcher revealed that the railroad tax bill in the first seven months of this year amounted to more than $617,000,000. This, he pointed out, is more than double what it was in the corresponding period of 1941, and almost five and three-fourths times greater than in the same months in the war year of 1918.

Materials and Prices

Following is a digest of orders and notices of interest to railroads issued by the War Production Board and the Office of Price Administration since August 28.

Bristle brushes—Amendment No. 3 to Order M-51, issued September 7, requires that all brushes made in the United States, except for war contracts and local health regulations, must contain at least 45 per cent of material other than pig and hog bristles. The amendment also redefines pig and hog bristles which come under the order from 3-in., the former figure, to 2-in., new or reclaimed, imported or domestic.

Chemicals—Order M-227, effective October 1, placed copper chemicals under complete allocation control to conserve copper scrap from which they are made. The chemicals include copper sulphate, carbonate, chloride, oxide, nitrate and cyanide. Small order deliveries may be made by certification from the purchaser to his supplier. Limits on small deliveries are 450 lb. of copper sulphate or 25 lb. of the other chemicals in any one month.

Priority indexes—The ninth supplement of Priorities in Force to May 31, 1942, was issued September 5 and contains the revised priorities actions for the period August 27 through September 2. A new booklet will be published on the first and sixteenth of each month according to present plans, giving a tabulation of priorities actions and forms indexed alphabetically and numerically.

Prices

Alloy castings—Maximum Price Regulation No. 214 (high alloy castings), effective September 7, established maximum prices for high alloy castings at levels prevailing between October 1 and 15, 1941. Previously high alloy castings were covered by the General Maximum Price Regulation and ceilings were the highest prices charged during March, 1942. The General Maximum Price Regulation was not adaptable because of the hundreds of different types of cast items whose specifications are changing. High alloy casting means any heat-resistant casting or corrosion-resistant casting, rough or machined, which has a ferrous and/or nickel base and which contains more than 8 per cent alloy, and also any chrome iron casting, abrasion-resistant, rough or machined, which has a ferrous base and which contains more than 8 per cent alloy. Heat-resistant casting means any nickel-chrome or chrome-nickel (carbon 1 per cent or under) high alloy casting, which normally operates at a metal temperature of 900 deg. or higher, except castings used up to 1200 deg. operated under conditions of high pressure and corrosion. Corrosion-resistant casting means any nickel-chrome or chrome-nickel (carbon 1 per cent or under) high alloy casting, which normally operates in contact with corrosive agents at temperatures less than 900 deg., including castings used up to 1280 deg. under conditions of high pressure and corrosion. Rough casting means a high alloy casting with respect to which the foundry processes have been completed but on which no machining, necessary construction welding or assembling by welding or other work of attachment has been performed.

Cross ties—Maximum Price Regulation No. 126, effective September 5, establishes maximum prices of railroad ties on the basis of the buyer's price rather than the seller's, and, in general, fixes prices at the highest price at which the buyer purchased ties during the period January 1, 1942 to March 31, 1942. Maximum prices established by the general regulation, which uses March, 1942 as a pricing base, were not representative of prevailing costs because purchase prices, in many instances, were based on contracts entered into in 1940 and 1941. The separate regulation also takes into consideration that almost every railroad purchases according to its own specifications and that the entrance of the government as a large-scale buyer of ties disturbed the normal price structure in the producing territories. The regulation covers approximately 88 per cent of the total tie production, including those manufactured in the Southern pine and Central hardwood regions from oak, pine, gum and cypress and those produced east of the Rocky Mountains from lodgepole pine, ponderosa pine, beech, birch and maple. The remainder of the total tie output originates west of the Rocky Mountains, being derived mainly from Douglas fir ties already covered by Maximum Price Regulation No. 26 (Douglas fir and other West Coast lumber). Ceiling prices for redwood ties are contemplated. Three similar pricing formulas are contained in the measure governing the maximum prices which may be paid for ties by the three classes of purchasers, namely, the railroads, the government and other persons such as brokers. The maximum price for railroad ties is the highest price at which each individual railroad purchased each size and species of the tie at each delivery point during the first quarter of 1942. This pricing formula is to be applied whether the ties are untreated or treated, and whether the point of delivery is within the producing territory, at a treating plant or at any other point specified by the railroad. The government may pay a producer 110 per cent of the price permitted the railroad on whose line the ties were produced, that is, the railroad nearest the producer and to which the producer normally sells his output. The formula regarding government purchase applies only to untreated ties. Charges for preservative treatment, as well as delivery charges, may be added to the basic untreated maximum price. For persons other than railroads or the government, the ceiling price is the same as the maximum price permitted the railroad on whose line the ties were produced, with the exception that treating and transportation charges may be added to the untreated price. A railroad which purchased ties between March 31, 1942, and May 11, 1942, at higher prices than in the period from January 1 to March 31, may apply for adjustment within 30 days of the effective date of the regulation. The application, which must be filed with the Washington, D. C. office of the OPA, must contain specified prices and other data. All persons who purchased railroad ties in the course of business or trade in the first three months of this year must file with the OPA a statement setting forth the species and quantity purchased, as well as the highest price paid.

Iron and steel—Supplementary Order No. 17, effective September 17, automatically licenses all sellers of iron and steel products for which ceiling prices were stablished by price regulations—Nos. 46, 49 and 159. Under these regulations falls the resale of ingots, semi-finished iron and steel products, finished hot rolled or cold rolled iron and steel products and other iron and steel products further finished in a manner commonly performed at steel works or rolling mills, also, all fabricated concrete reinforcing bars and relaying rail. The order makes a license a required condition for selling any iron or steel product covered by the regulations, and permits a court to suspend the license for violation of a price regulation. The regulation broadens the licensing provision and brings all resellers of the products covered by the three regulations under a uniform licensing section, as well as wholesalers. Retailers are excluded from the new licensing order since they are already licensed under the General Maximum Price Regulation.

Lumber—Supplementary Order No. 18, issued September 11, licenses retailers, wholesalers, distributors and all other persons selling lumber and lumber products, with the exception of mills, manufacturers and producers, who make sales subject to certain specified lumber, lumber products or building materials regulations, and makes the license a required condition of selling material or products currently subject to these regulations. These regulations include Douglas fir plywood, Southern pine lumber, Douglas fir or other West Coast lumber, Western pine lumber, Southern hardwood lumber, Appalachian hardwood lumber, Central hardwood lumber, red cedar shingles, railroad ties, softwood, distribution yards builders' hardware and screen cloth, domestic fuel oil storage tanks and cast iron soil pipe and fittings. The new order provides for suspension of licenses for violation of price regulations.

Amendment No. 5 to Maximum Price Regulation No. 146 (Appalachian hardwood lumber), issued September 2, established dollars-and-cents maximum prices for recurring special grades or items of Appalachian hardwood lumber for 15 individual mills. A recurring special grade is one sold on special specifications requested by the purchaser for which no specific maximum price is provided in the regulation, and to which reference was made in the individual mill's published price lists or unsolicited trade quotations for the years of 1941 or 1942.

Maximum Price Regulation No. 215 (distribution yard sales of softwood), issued September 5, established maximum prices for sales of softwood lumber from distribution yards, including southern pine, western pine, Douglas fir and hemlock. It is the first lumber schedule which deals with shipments of lumber from distribution yards, all previous specific regulations having applied only to sales where shipment originates at mills. The softwood covered by the measure includes all woods for which maximum mill prices have been established in previous regulations, or over 90 per cent of all softwood normally handled by distribution yards. The regulation removes these softwoods sold by yards from the provisions of the General Maximum Price Regulation and is effective September 10.

Steel rejects—Amendment No. 7 to Revised Price Schedule No. 6 (iron and steel products), effective September 17, establishes maximum prices for rejected flat-rolled and semi-finished iron and steel products. Previously they could be sold at levels as high as those established for top-quality products. Ceiling prices for rejects are fixed at 85 per cent of the basing point price for a prime product at the basing point nearest the point of shipment, plus 85 per cent of certain extras. Rejects are defined as flat-rolled iron or steel products of a designated size and gage, which have minor surface defects, lack of flatness, camber, off or fluctuating gage or temper and similar imperfections, but which may be utilized without requiring unusual processing in order to remove or minimize injurious defects. Maximum prices fixed for wasters are 75 per cent of the basing point price and extras. Wasters are flat-rolled iron and steel products which are of a designated specific gage but are unassorted to size, and which otherwise are of the same quality as rejects. Ceiling prices for waste wasters are 65 per cent of the basing point price and extras. Waste wasters are products unassorted as to gage and size, and which have serious imperfections.

Warehouse steel—A series of questions and answers on the regulation governing such sales of steel from warehouses (Revised Price Schedule No. 49), issued September 9, emphasizes that it is a violation of Revised Price Schedule No. 49 for a warehouse to sell a shipment of 39,000 lb. of a steel product solely with the view of obtaining the higher less-than-carload price permitted on shipments of less than the 40,000 lb. full carload. When any five sales or less to one customer made by any seller in a semi-monthly period aggregate 40,000 lb., a report of all shipments made to that particular customer during the period must be made.

GENERAL NEWS

War Brings Rapid Technical Changes

The present auto is already an antique—great shift in materials seen

The 1942 model automobile has aged, technically, at least twenty years since its production for civilian use was halted, declared Dr. Charles M. A. Stine, du Pont vice-president and adviser on research and development, in a "keynote" speech at a recent meeting in Buffalo, N. Y., of the American Chemical Society that was full of reasons why immense and revolutionary (in a technical sense) post-war industrial activity may be expected.

"The pressures of this war are compressing into the space of months developments that might have taken us a half century to realize if necessity had not forced the pace," he said. "Today we produce to destroy. But tomorrow we will produce to build, and we will continue to invent and thus to multiply our possessions. Released by an American victory, the stream of production, compared with its volume in the past, will be as a great river is to one of its tributary creeks. We will have at our command ten, fifty, a hundred times what we had before, chiefly of new materials.

"Fuels and metals and plastics are now ready to complete the revolution in transportation begun early in the century. The automobile manufacturer's slate has been wiped clean for a fresh start, which should result in new cars that will be of incredible efficiency as judged by present standards. Sealed cooling systems, proved on large-scale by aviation, may end in the post-war car the nuisance of adding water to radiators. Weights may be half what they are, saving from 1,500 to 2,000 pounds of useless load. The power output per cubic inch of piston displacement may double, treble and even quadruple. Fuels may yield 50 miles to the gallon, or better. They say gasoline itself may be displaced by a superior petroleum product.

"War shortages of conventional materials will have resulted in eager trials of every new material science and industry could offer. And countless of the 'substitutes' will have proved their superiority. Thus, an experience with and an acceptance of the new will have been gained that ordinarily might have taken many years to achieve.

"We will have glass that is unbreakable and glass that will float, wood that won't burn, and laminations of plastics and wood that will compete with the structural metals. Hosiery derived from air, water and coal, a wonder of pre-war days, is but the forerunner of many innovations from the same source, ranging from shoes that contain no leather and window screens that contain no wire, to machinery bearings that contain no metal."

In the address many directions that progress might take were sketched. Many new materials will be available—new plastics, innumerable synthetics from petroleum, new fabricating materials. "The aluminum-producing capacity being created will furnish in one year metal enough to build thrice the number of passenger cars now operating on all American railroads." Magnesium, the lightest of all structural metals, already is cheaper by volume than aluminum at 15 cents a pound, and our capacity to produce it will be more than double our 1939 aluminum output.

"In turn, steel is challenging the lighter metals," he continued. "Low alloy steels and new modifications of the higher alloy steels, fresh from the laboratory, are bidding for expanding uses in aviation and wherever lightness and strength are requisites. In the steel industry today, technicians speak confidently of monster aircraft that will be largely steel. These new alloys are three times the weight of aluminum and almost five times the weight of magnesium, but their tensile strength approximates 190,000 pounds to the square inch. This advantage permits weight to be shed by reducing bulk and eliminating needless supports."

Senate Finance Committee Increases Transport Tax

The Senate finance committee, which is in the process of rewriting the current tax bill, has tentatively voted two important changes in the rates of the transportation tax. The committee has agreed to increase the rate on transportation of persons to 15 per cent and the rate on seating and sleeping accommodations to 20 per cent. The present rate on both transportation and sleeping accommodations is five per cent, and the House bill increased this to 10 per cent.

Southwestern Ltd. in Collision

An engineman, a fireman and an express messenger were killed and 50 passengers were injured on September 16, when the westbound Southwestern Limited of the New York Central ran through an open switch at Ashmore, Ill., on the Cleveland, Cincinnati, Chicago & St. Louis, and collided head-on with an eastbound oil train of 70 loaded tank cars standing on a siding. Fire broke out in three tank cars. Six coaches were derailed and one coach turned over. Most of the injured persons suffered from burns, only a few of which were serious.

Short-Line Wage Report Submitted

Emergency board would give 10 cents an hour over May 31, 1941, basis

Paid vacations and wage increases of 10 cents an hour over the May 31, 1941, basis, together with provisions for hourly minimums of 43 cents on short lines and 46 cents on the few Class I roads and car lines involved, were recommended in the Emergency Board report submitted this week to President Roosevelt on the dispute involving carriers which had not brought the wages of their non-operating employees into line with the mediation settlement of the general wage case last December. The Board recommended that the increases be made retroactive to December 1, 1941, but the effect of making the advances on the May 31, 1941, basis would be to give the carriers credit for any increases they have made since June 1, 1941.

In the latter connection, for example, the Board's minimum-wage recommendations would result in an increase of three cents an hour for affected short-line employees and six cents an hour for minimum-rate employees of other carriers involved—because the minimum wage for the railroad industry has since May 31, 1941, been increased under the provisions of the Fair Labor Standards Act, being fixed at 40 cents an hour effective August 31. As the Board's recommendations put it, "the increases in rates of pay shall be added to the rates of pay in existence on May 31, 1941"; and "in the calculation of back pay subsequent to December 1, 1941, carriers which have made adjustments or paid bonuses subsequent to June 1, 1941, shall be entitled to credits and offsets for such increases or bonuses, provided that this recommendation shall not be construed to reduce the rate of pay of any employee." Also, the recommendations would permit the carriers, if they so elect, to meet the back pay in six monthly installments.

The Emergency Board was the first appointed by William M. Leiserson, chairman of the National Railway Labor Panel which was set up by President Roosevelt's May 21 executive order to provide wartime procedures whereby labor-management disputes in the railroad industry could be submitted to emergency fact-finding boards without the necessity for the taking of a strike vote among the labor organizations involved. Members of the Board were: Walter P. Stacy, chief justice of the Supreme Court of North Carolina, chairman; W. H. Spencer, dean of the School of

Business, University of Chicago; and Edwin E. Witte, professor of economics, University of Wisconsin. Judge Stacy was the chairman of a previous emergency board which recommended against the railroads' 15 per cent wage cut proposal of 1938.

As its provision for an installment plan on the back pay indicates, the Board recognized that the "financial condition of all of the carriers involved in these proceedings is weak, and that the financial condition of several is precarious, indeed." At the same time, however, it found other "more important" considerations, such as the Ex Parte 148 increase which benefited all the carriers here involved; the prospective increase in traffic as a result of the war program; and the fact that "the carriers here are only a small segment of a large industry, the predominant portion of which has already made the adjustments in wages and vacations which are requested of these carriers." Also, it is pointed out in the report that the short lines have had wage rates differentially lower than those of most Class I roads; and thus, as the Board sees it, the effect of its recommendations "both as to wages and vacations with pay, is merely to preserve the differentials which have existed in the past."

Failure to do the latter, the Board went on, "would create a distortion in the basic wage structure of the railroad industry." Moreover, it added, "the costs of living of these employees have increased approximately 18 per cent during the past 18 months." Previously, the Board had emphasized that a "great majority" of the employees involved "are low-paid employees upon whom the increased cost of living falls with most depressing effects"; and it went on to insist that in recommending the increases it did, "the Board does not contribute to the inflationary trend."

"The Board," said the report in another place, "is not here appraising the wage structure of a whole industry; it is merely considering the wage situation in a very small segment of a large industry, and unfortunately a segment of the industry containing many weak and unpromising carriers. . . . It is not for this Board to pass any judgment on the wisdom or unwisdom of the increases in pay which resulted from the proceedings of the Emergency Board of 1941. This Board, however, can not close its eyes to the fact that as a result of the proceedings of the 1941 Board the wage structure of practically the whole railroad industry has been substantially revised upward."

While no estimate was available as to the cost of accepting the recommendations, C. A. Miller, vice-president and general counsel of the American Short Line Railroad Association, who represented several of the carriers, estimated that approximately 2,500 employees would be affected. It was expected that the carriers would be disposed to accept the recommendations insofar as their respective financial situations permitted.

Because some of the carriers had made partial settlements, the disputes, as passed upon by the Board, involved some carriers as to wages only, some as to vacations only, and some as to both. Carriers involved are as follows: Addison Miller Company; Alabama, Tennessee & Northern; Atlanta, Birmingham & Coast; Bangor & Aroostook; Burlington Refrigerator Company; Blue Ridge; Canton; Carolina & Northwestern; Columbus & Greenville; Danville & Western; Des Moines & Central Iowa; Detroit & Mackinac; Fruit Growers Express Company; Georgia & Florida; High Point, Randleman, Asheboro & Southern; Lackawanna & Wyoming Valley; Louisiana & North West; Maryland & Pennsylvania; Meridian & Bigbee River; Midland Continental; Minnesota Western; Mississippi Central; Missouri & Arkansas; New York Dock; New Orleans Public Belt; New York, Ontario & Western; Quanah, Acme & Pacific; Rapid City, Black Hills & Western; Western Fruit Express Company; Wichita Falls & Southern; Yadkin.

Missouri Pacific "Victory" Locomotive—A Correction

Twenty-three of the new Missouri Pacific 2100 Class locomotives "made 212,740 miles" in July, 1942, and not "each an average of," as stated on page 367 of the September 5 issue of the *Railway Age*.

Mississippi Valley Association Cancels Annual Meeting

The Mississippi Valley Association has cancelled its twenty-fourth annual convention this fall and instead will hold regional meeting in various sections of the Mississippi Valley, which can be attended with a minimum of travel.

A. C. & Y. Suggests Some Routes

The Akron, Canton & Youngstown and Northern Ohio are distributing a newly prepared summary of routing information designed to inform shippers and receivers of freight how those roads serve as intermediate carriers in a variety of through "overhead" routes. Large diagrammatic maps accompany the tabular matter.

Annual Report of Study Board Submitted This Week

The Board of Investigation and Research created by the Transportation Act of 1940 was scheduled to submit its annual report to Congress on September 18. The report, which had not been completed when this issue went to press, will be reviewed next week.

Man-Failure Rises as Cause of Train Accidents

The last 100 train accident reports of the Interstate Commerce Commission reveal that 70 per cent of these accidents were due to man failures, according to the October circular of the A. A. R. Safety Section. Of these 100 accidents 61 were collisions between trains, and 33 were derailments. Five involved equipment failures and 13 were due to track failures. Of the man failures, 21 were flagging failures, 14 were due to excessive speed, and 11 resulted from faulty response to signal indications.

In an analysis of the Interstate Commerce Commission's annual reports summarizing statistics of railway accidents, the Safety Section calls attention to the fact that, of all train accidents, the percentage of those caused by man failure increased from 29.6 in 1923 to 36.9 in 1940 and to 44.3 in 1941. The percentage due to failure of equipment in the same period has declined from 43.0 in 1923 to 33.0 in 1940 and to 26.4 in 1941. While the total number of train accidents listed by the Commission has decreased from 27,497 in 1923 to 9,401 in 1941, there has been an annual increase in the number each year since 1938, and in May, 1942, the total was reported to be 29 per cent more than in the same 1941 month.

Club Meetings

The meeting of the New England Railroad Club on October 13 will begin with a dinner at 6:30 p. m. at the Hotel Touraine, Boston, Mass., after which W. C. Kendall, chairman of the Car Service Division of the Association of American Railroads, will speak on Handling Wartime Traffic.

At a dinner meeting of the Traffic Club of Baltimore, to be held jointly with the Maryland Motor Truck Owners Association in Baltimore, October 14, the guest speaker will be ODT Director Joseph B. Eastman. Governor O'Connor of Maryland will be the toastmaster.

Still More Time on Public-Aids Briefs

The Transportation Board of Investigation and Research has further postponed from September 25 until October 5 the deadline for the filing of briefs in the public-aids-to-transportation investigation which was the subject of recent hearings. Likewise the deadline for reply briefs has been further extended from October 15 until October 25.

Mott Haven Pullman Employees Win N. Y. Safety Award

A record of 21 months without a lost time accident has just brought to Pullman employees stationed in the Mott Haven yards of the New York Central at New York City the "sole survivorship" safety award in the sixth state-wide "No Accident Endurance Contest" sponsored by Associated Industries of New York State. This record represents 2,123,165 hours of work without accident.

August Employment Is Up 9.55 Per Cent

Railroad employment increased another 0.46 per cent—from 1,316,365 to 1,322,435—during the one-month period from mid-July to mid-August, while the August total was 9.55 per cent above August, 1941, according to the Interstate Commerce Commission's latest compilation based on preliminary reports. The index number, based on the 1935-1939 monthly average as 100 and corrected for seasonal variation, was 126.4 for August, as compared with July's 125.7 and August, 1941's 115.4.

August employment in all groups was slightly above that of the previous month, all increases being less than one per cent except the 1.27 per cent rise in yardmas-

ters, switch-tenders and hostlers. Meanwhile, all groups were also above August, 1941, the increases ranging from 6.28 per cent for executives, officials, and staff assistants to 12.47 per cent for the professional, clerical, and general group.

Freight Car Loading

Loading of revenue freight for the week ended September 12 totaled 814,885 cars, the Association of American Railroads announced on September 17. This was a decrease of 73,075 cars, or 8.2 per cent under the preceding week due to the Labor Day holiday, a decrease of 99,771 cars, or 10.5 per cent below the corresponding week in 1941, and an increase of 10,620 cars, or 1.3 per cent above the same week in 1940.

Loadings of revenue freight for the week ended September 5 totaled 887,960 cars. This was a decrease of 11,459 cars or 1.3 per cent below the preceding week, but an increase above the corresponding week in 1941, which included Labor Day, of 90,169 cars or 11.3 per cent, and an increase above the same week of 1940, which also included Labor Day, of 192,866 cars, or 27.7 per cent. The summary for the week, as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loadings

For Week Ended Saturday, September 5

District	1942	1941	1940
Eastern	164,744	160,075	136,815
Allegheny	189,095	177,703	145,439
Pocahontas	56,333	53,214	45,670
Southern	121,387	109,315	94,098
Northwestern	148,866	129,867	126,052
Central Western	134,301	115,074	102,036
Southwestern	73,234	52,543	44,984
Total Western Districts	356,401	297,484	273,072
Total All Roads	887,960	797,791	695,094
Commodities			
Grain and grain products	44,084	36,878	37,254
Live stock	16,143	12,617	15,876
Coal	166,100	150,164	118,522
Coke	14,275	12,603	9,844
Forest products	52,442	39,646	34,657
Ore	85,862	70,802	69,487
Merchandise l.c.l.	88,997	138,398	134,579
Miscellaneous	420,057	336,683	274,875
September 5	887,960	797,791	695,094
August 29	899,419	912,720	768,775
August 22	869,404	899,788	761,108
August 15	868,845	890,337	743,050
August 8	849,752	878,505	727,073
Cumulative Total, 36 weeks	29,620,481	28,525,330	24,150,012

In Canada.—Carloadings for the week ended September 5 totaled 67,537, as against 66,343 for the previous week and 61,544 for the comparable 1941 week—according to the summary of the Dominion Bureau of Statistics.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
Sept. 5, 1942	67,537	38,242
Aug. 29, 1942	66,343	37,117
Aug. 22, 1942	65,652	36,666
Sept. 6, 1941	61,544	27,577
Cumulative Totals for Canada:		
Sept. 5, 1942	2,291,588	1,202,224
Sept. 6, 1941	2,122,130	1,051,176
Sept. 7, 1940	1,858,802	872,789

WPB Wants Three More Santa Fe Branch Lines

Three more branch lines of the Atchison, Topeka & Santa Fe, totaling approximately 155 miles, in Oklahoma and Kansas have been requisitioned by the War Production Board acting through the Metal Reserve Company. As reported in the *Railway Age* two weeks ago, 78 miles of track between Boise City, Okla., and Farley, N. M., were previously requisitioned. The new requisition covers 32.63 miles between Anthony, Kan., and Cherokee, Okla.; 59.75 miles between Madison Junction, Kan., and Moline; and 63.45 miles between Benedict Junction and Emporia.

D. & H. Case to Supreme Court

A petition to the United States Supreme Court, which in effect seeks a reversal of the Appellate Courts' findings in the case of the Delaware & Hudson wherein the railroad claimed that 170 suits for extra pay brought against it by members of the five operating brotherhoods were blocked from reaching final awards by the National Railroad Adjustment Board, is being prepared by the attorney for the five operating brotherhoods.

The D. & H. in June, 1941, filed suit against 10 members of Division 1 of the National Railroad Adjustment Board, seeking by this means to compel Royal A. Stone, referee, and the members of Division 1 to make formal awards on the proposals offered in D. & H. cases that were suddenly withdrawn by labor representatives in 1940. The D. & H. sought to have the court direct the defendants, including Mr. Stone, to continue their original hearings on the disputes and enter of record the permanent denial and dismissal with prejudice in each dispute or accept the previous decisions of Referee Stone. The railway also sought a temporary injunction to prevent Divsion 1 from taking

SELECTED INCOME AND BALANCE-SHEET ITEMS OF CLASS I STEAM RAILWAYS

Compiled from 132 Reports (Form IBS) Representing 136 Steam Railways
(Switching and Terminal Companies Not Included)

All Class I Railways

Income Items	For the Month of June 1942	For the Month of June 1941	For the Six Months of 1942	For the Six Months of 1941
1. Net railway operating income	$118,730,960	$93,316,128	$551,656,622	$433,822,007
2. Other income	15,900,862	15,541,024	73,963,485	71,982,774
3. Total income	134,631,822	108,857,152	625,620,107	505,804,781
4. Miscellaneous deductions from income	2,430,222	2,190,361	15,762,468	13,991,557
5. Income available for fixed charges	132,201,600	106,666,791	609,857,639	491,813,224
6. Fixed charges:				
6-01. Rent for leased roads and equipment	15,108,787	13,202,501	84,493,288	77,552,735
6-02. Interest deductions[1]	36,952,939	38,449,974	222,129,543	231,065,492
6-03. Other deductions	118,121	119,355	705,649	712,663
6-04. Total fixed charges	52,179,847	51,771,830	307,328,480	309,330,890
7. Income after fixed charges	80,021,753	54,894,961	302,529,159	182,482,334
8. Contingent charges	2,331,208	1,547,650	13,343,493	9,250,715
9. Net income	77,690,545	53,347,311	289,185,666	173,231,619
10. Depreciation (Way and structures and equipment)	20,102,752	18,076,842	117,346,015	107,277,846
11. Amortization of Defense Projects	7,213,897	5,616	33,631,668	5,616
12. Federal income taxes	72,533,701	19,790,535	278,565,502	67,810,161
13. Dividend appropriations:				
13-01. On common stock	9,060,654	7,669,245	50,909,609	53,085,558
13-02. On preferred stock	695,298	75,000	13,302,897	11,306,673
Ratio of income to fixed charges (Item 5 ÷ 6-04)	2.53	2.06	1.98	1.59

All Class I Railways

Selected Asset and Liability Items	Balance at End of June 1942	Balance at End of June 1941
20. Investments in stocks, bonds, etc., other than those of affiliated companies (Total, Account 707)	$478,724,241	$558,646,744
21. Cash	$831,035,186	$736,013,179
22. Temporary cash investments	186,418,688	77,110,960
23. Special deposits	154,686,100	139,332,511
24. Loans and bills receivable	1,038,549	1,531,185
25. Traffic and car-service balances—Dr.	41,086,165	32,775,008
26. Net balance receivable from agents and conductors	117,946,801	73,387,137
27. Miscellaneous accounts receivable	308,448,689	151,212,580
28. Materials and supplies	534,418,743	379,044,979
29. Interest and dividends receivable	19,813,606	16,697,521
30. Rents receivable	1,332,524	1,206,031
31. Other current assets	9,342,897	7,883,647
32. Total current assets (items 21 to 31)	$2,205,567,948	$1,616,194,738
40. Funded debt maturing within 6 months[2]	$85,981,391	$79,792,889
41. Loans and bills payable[3]	$34,264,428	$72,249,573
42. Traffic and car-service balances—Cr.	86,387,546	56,795,727
43. Audited accounts and wages payable	302,719,552	252,822,234
44. Miscellaneous accounts payable	72,636,444	58,126,397
45. Interest matured unpaid	74,431,859	56,545,801
46. Dividends matured unpaid	25,703,491	24,824,190
47. Unmatured interest accrued	61,917,646	63,032,362
48. Unmatured dividends declared	10,131,711	6,720,300
49. Unmatured rents accrued	16,382,587	17,071,373
50. Accrued tax liability	572,012,939	273,778,961
51. Other current liabilities	58,483,650	44,142,030
52. Total current liabilities (items 41 to 51)	1,315,071,853	926,108,948
53. Analysis of accrued tax liability:		
53-01. U. S. Government taxes	445,962,323	154,506,758
53-02. Other than U. S. Government taxes	126,054,616	119,272,203

[1] Represents accruals, including the amount in default.
[2] Includes payments of principal of long-term debt (other than long-term debt in default) which will become due within six months after close of month of report.
[3] Includes obligations which mature not more than 2 years after date of issue.

action on the alleged "rehashed" cases which were filed in lots of five.

Dismissal of the suit was asked by the brotherhoods and on September 17, 1941, Federal Judge Michael L. Igoe at Chicago held that the District Court lacked jurisdiction. The railroad carried the case to the United States Circuit Court of Appeals and on June 18, 1942, it directed the District Court to consider a motion that would compel the adjustment board to hold hearings and act on the 170 disputes. It is a review of the latter decision which the brotherhoods seek.

D. T. & I. Asks Extension of Stoker Order

Due to the inability to obtain new locomotives, the Detroit, Toledo & Ironton has asked the Interstate Commerce Commission to postpone beyond April 15, 1944, the time in which it must equip all of its locomotives with automatic stokers. The petition goes on to say that the road will have eight locomotives still unequipped with stokers on April 15, 1944, due to the fact that it is inadvisable to equip the locomotives now in use and also because it is impossible to purchase new locomotives because of the shortage of war materials.

Denver Zephyr Dynamited

Twelve explosive charges placed upon the track of the Chicago, Burlington & Quincy two miles east of Nodaway, Ia., rocked its westbound Denver Zephyr when set off by unknown individuals at 12.05 a. m. on September 14 as the train was traveling at 80 m. p. h. No cars were derailed and no persons were injured. Damage to the cars and the track was slight, a few hatches being blown open, and some windows and equipment under the cars being broken. The train, after a delay of five hours, was brought into Omaha, Neb., under its own power, the power units having escaped the blasts, where passengers were transferred to another train.

The attempt to derail the Zephyr is linked with the theft of dynamite and a detonator by three men from the state's quarry at Corning, Ia., nine miles from Nodaway on three nights preceding the explosion. Their thefts included 137 pieces of dynamite, wire and a plunger-type detonator. The wire and the detonator were discovered at the scene of the crime by the crew of a freight train which searched the surrounding territory.

According to a reconstructed version of the crime, one-half of the dynamite stolen was divided into bundles of 5 and 6 sticks and planted in the ballast between the rails, 12 in. from one rail, against a tie at 12 different points in a distance of 500 ft.—600 ft. at irregular intervals ranging from 15 ft. to 60 ft. All charges were wired to the detonator and set off simultaneously. The explosions, which took place after the two power units and two head cars had passed over the furthermost charge, damaged the remaining 10 cars of the train, a 12-section sleeping car and two coaches receiving most of the damage.

NET INCOME OF LARGE STEAM RAILWAYS

(Switching and Terminal Companies Not Included)

Name of Railway	Net Income After Depreciation and Amortization of Defense Projects — For the Six Months of 1942	1941	Net Income Before Depreciation and Amortization of Defense Projects — For the Six Months of 1942	1941
Alton	$846,089	* $123,391	$987,999	$13,505
Atchison, Topeka & Santa Fe System[3]	22,004,904	7,701,498	29,541,676	13,793,472
Atlantic Coast Line	10,089,233	4,884,512	12,451,478	6,071,921
Baltimore & Ohio	12,559,527	8,869,820	17,998,736	12,627,211
Boston & Maine	3,665,756	3,225,150	4,628,264	3,935,285
Central of Georgia[2]	1,031,702	301,800	1,603,932	734,909
Central of New Jersey[2]	1,344,481	* 506,205	2,047,944	153,107
Chesapeake & Ohio	12,086,954	15,502,162	17,364,896	19,789,539
Chicago & Eastern Illinois	860,144	787,616	1,172,274	1,096,662
Chicago & North Western[2]	2,154,511	* 571,395	4,957,636	1,841,027
Chicago, Burlington & Quincy	7,081,422	2,971,990	10,524,755	5,754,219
Chicago Great Western	671,413	640,404	961,573	923,591
Chicago, Milwaukee, St. Paul & Pacific[2]	2,378,244	* 67,584	7,095,902	2,960,570
Chicago, Rock Island & Pacific[2]	4,909,233	1,178,120	7,127,932	3,358,972
Chicago, St. Paul, Minneapolis & Omaha	* 426,750	* 774,253	* 122,695	* 505,829
Delaware & Hudson	2,403,205	1,525,290	3,433,581	2,098,092
Delaware, Lackawanna & Western	2,009,819	1,972,794	3,735,241	3,209,488
Denver & Rio Grande Western[2]	2,543,042	* 2,332,528	3,543,150	* 1,673,624
Duluth, Missabe & Iron Range	1,754,185	3,763,056	2,498,881	4,204,609
Elgin, Joliet & Eastern	1,014,046	3,006,274	2,493,469	3,623,291
Erie	6,190,491	3,416,404	9,565,490	5,270,422
Grand Trunk Western	* 587,020	1,330,340	102,171	1,914,526
Great Northern	5,525,393	3,184,498	9,664,016	5,353,939
Gulf, Mobile & Ohio	1,418,263	950,290	1,907,965	1,376,077
Illinois Central	4,914,275	4,727,810	9,045,115	8,077,140
Lehigh Valley	1,283,541	1,826,166	3,231,922	2,831,122
Long Island	* 450,662	* 576,126	622,842	209,677
Louisville & Nashville	5,788,102	7,446,670	9,414,248	9,678,376
Minneapolis, St. Paul & Sault Ste. Marie[2]	* 2,555,643	* 3,048,365	* 1,479,532	* 2,409,689
Missouri-Kansas-Texas	1,271,325	* 964,918	1,841,308	* 388,059
Missouri Pacific[3]	10,681,782	* 293,505	13,105,313	1,959,177
New York Central[4]	16,616,907	11,858,506	28,443,276	20,951,046
New York, Chicago & St. Louis	3,902,260	4,312,665	5,070,340	5,145,541
New York, New Haven & Hartford[2]	7,371,521	2,143,607	9,527,212	3,804,087
Norfolk & Western	9,524,668	14,266,976	15,373,626	17,578,921
Northern Pacific	2,834,936	252,654	7,197,056	2,098,345
Pennsylvania	25,437,815	20,320,045	42,864,523	34,539,646
Pere Marquette	1,169,547	1,830,754	2,696,930	2,992,722
Pittsburgh & Lake Erie	1,968,426	2,853,732	3,569,922	4,059,063
Reading	5,704,206	4,484,343	8,132,122	6,003,105
St. Louis-San Francisco[2]	2,225,331	* 1,113,246	3,741,103	389,942
St. Louis, San Francisco & Texas	187,853	* 27,750	187,853	* 27,750
St. Louis Southwestern[2]	2,921,175	1,565,647	3,277,288	1,893,589
Seaboard Air Line[3]	8,572,881	571,141	9,838,155	1,789,750
Southern	11,287,600	7,656,579	15,890,634	9,544,272
Southern Pacific[5]	25,740,227	14,246,058	34,029,415	18,296,981
Texas & Pacific	2,677,666	1,364,117	3,332,935	1,998,275
Union Pacific (including leased lines)	14,337,707	5,782,465	19,556,175	9,864,534
Wabash	2,406,964	897,331	3,986,621	1,982,742
Yazoo & Mississippi Valley	4,283,783	523,217	4,559,224	796,084

* Deficit.
[2] Report of trustee or trustees.
[3] Includes Atchison, Topeka & Santa Fe, Gulf, Colorado & Santa Fe, and Panhandle & Santa Fe.
[4] Includes Boston & Albany, lessor to New York Central R. R.
[5] Includes Southern Pacific Company, Texas & New Orleans, and leased lines. The report contains the following information: "Figures reported for Southern Pacific Transportation System exclude offsetting debits and credits for interest on funded securities and rentals for leased properties between companies included therein. Operations for 1942 of separately operated Solely Controlled Affiliated Companies (excluding results for Southern Pacific Railroad Company of Mexico), not included in income results for the System, resulted in a net income of $236,802 for the month and a net loss of $86,507 for the period. These results include $195,553 for the month and $1,173,413 for the period representing interest on bonds of such companies owned by Southern Pacific Company not taken into income by S. P. Co. and therefore, not included in the 1942 income results for the System. The combined results for 1942 for Southern Pacific Transportation System and separately operated Solely Controlled Affiliated Companies (excluding SPRR Co. of Mexico) amounted to a net income of $6,169,759 for the month and $26,827,133 for the period. Figures herein given exclude results of SPRR Co. of Mexico for the reason that policy was adopted January 1, 1940, of making no further advances to that company, it being required to conduct its operations entirely within its own resources."

Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

American Welding Society to Hold Convention in Cleveland

The twenty-third annual meeting of the American Welding Society will be held from October 12 to 15, inclusive, at the Hotel Cleveland, Cleveland, Ohio. Although the program as outlined accents the importance of welding under the present war-production demands, many of the papers will be of general interest. Fifty-seven papers are scheduled for presentation covering the training of welding operators, fatigue and impact testing of welds, weldability of steels, flame cutting and nondestructive testing and inspection of welds. Other developments in all fields of production welding will be covered.

Pacific Coast Board Meets at Los Angeles

The Pacific Coast Transportation Advisory Board held its sixtieth regular meeting at Los Angeles, Cal., on September 17 and 18. Highlights of the meeting were addresses by D. T. Ayers, superintendent freight car service, of the Southern Pacific, on Freight Car Efficiency from a Railroad Viewpoint; by H. A. Huckaba, district manager of the Association of American Railroads, on Transportation Conditions in the Territory of the Board; by W. C. Griffin, assistant manager port traffic of the Car Service division, A. A. R., on the Situation at Pacific Coast Ports; by G. C. Randall, manager of port traffic of the Car Service division, on National Transportation conditions; by Walter A. Rohde, manager of the Transportation department of the Chamber of Commerce of San Francisco, on Office of Defense Trans-

portation Orders; and by Brigadier General F. Gilbreath, U. S. A.—port commander of the San Francisco port of embarkation. Other features were a report of the Port Traffic Control committee, and a Freight Claim Prevention committee meeting.

July Accident Statistics

The Interstate Commerce Commission on September 16 made public its Bureau of Transport Economics and Statistics' preliminary summary of steam railway accidents for July and this year's first seven months. The compilation, which is subject to revision, follows:

Item	Month of July		7 months ended with July	
	1942	1941	1942	1941
Number of train accidents*	1,051	825	7,280	4,953
Number of casualties in train, train-service and nontrain accidents:				
Trespassers:				
Killed	255	243	1,153	1,191
Injured	178	205	902	1,063
Passengers on trains:				
(a) In train accidents*				
Killed	...	...	20	4
Injured	227	51	672	651
(b) In train-service accidents				
Killed	5	1	23	5
Injured	220	138	1,158	975
Travelers not on trains:				
Killed	4	2	11	4
Injured	70	68	430	505
Employees on duty:				
Killed	90	62	510	371
Injured	2,963	2,463	18,044	13,120
All other nontrespassers:**				
Killed	158	165	1,231	1,130
Injured	470	423	3,802	3,593
Total—All classes of persons:				
Killed	512	473	2,948	2,705
Injured	4,128	3,348	25,008	19,907

* Train accidents (mostly collisions and derailments) are distinguished from train-service accidents by the fact that the former cause damage of more than $150 to railway property.

** Casualties to "Other nontrespassers" happen chiefly at highway grade crossings. Total highway grade-crossing casualties *for all classes of persons, including both trespassers and nontrespassers,* were as follows:

Persons:				
Killed	137	144	1,112	1,019
Injured	234	275	2,643	2,497

I. C. C. Staff Exhibits in General Rate and Classification Probe

The Interstate Commerce Commission this week made public five exhibits which will be offered in evidence through Dr. Ford K. Edwards of the Bureau of Transport Economics and Statistics at the further hearing in the Nos. 28300 and 28310 investigations of the class rate structure and consolidated freight classification, which is scheduled for Indianapolis, Ind., on September 22.

The exhibits are entitled: Interterritorial Interest of Class I Steam Railways; Relative Territorial Costs 1939 and 1941, Analyses of Switching Costs and Other Data; Territorial Rail Costs based on a Separation of Out-of-Pocket and Constant Expenses 1939; Territorial Unit Costs for Railroad Freight Service 1939; and Territorial Movements of Carload Freight on May 27, 1942.

The exhibit on the interterritorial interest of Class I roads presents data showing total freight operating expenses, rents, and taxes by territories, and also that part of such total borne by roads that extend into other territories. "In New England," the exhibit's introductory statement said, "only 9.77 per cent of the expense relates to lines represented in other territories. This is accounted for by the Boston & Albany, which is a part of the New York Central system. At the other extreme is the Western Trunk Line territory, for which 84.61 per cent of the total expense is incurred by lines serving other territories also. The Southwestern and Mountain Pacific territories have corresponding percentages in excess of 50. The average for all territories is 33.66 per cent."

The relative territorial costs study is designed to determine what changes occurred in the relative costs for the respective territories between 1939 and 1941. The foreword interprets figures in the study as indicating that "with the exception of the expense per revenue ton-mile, the unit costs in the Eastern Territory have not only increased generally, but the increase has generally been greater than in the remaining territories." Meanwhile, the unit costs per revenue ton-mile "have decreased in all territories principally as a result of a heavier loading of cars and a decrease in the return empty movement;" but "the decrease has been smaller in the East than in other territories."

"The conclusion can be drawn," the statement continues, "that the freight expenses per revenue ton-mile for all Class I carriers have decreased 8.32 per cent between 1939 and 1941. The decrease has been greater in the Southern and Western territories than in the Eastern and Pocahontas territories, thus leaving unchanged the position of the territories when arranged in the order of their relative costs."

The stated purpose of the third exhibit listed above is "to show the results of further studies made of territorial costs based on 1939." These studies include the separation of out-of-pocket costs from the constant expenses, and a separate development of the territorial unit costs for each. With the out-of-pocket expenses there is included a return on that portion of the property value which has been found to be variable with traffic.

The study of territorial movements on May 27, 1942, is based on data gathered by the Office of Defense Transportation when it obtained from all railroad copies of waybills of all carload freight originated on their lines on that date.

August Operating Revenues 36.3 Per Cent Above 1941

Preliminary reports from 89 Class I railroads, representing 81.5 per cent of total operating revenues, made public September 16 by the Association of American Railroads, show that those roads, in August, had estimated operating revenues amounting to $548,264,202 compared with $402,267,250 in the same month of 1941, or an increase of 36.3 per cent. August freight revenues of the 89 roads amounted to $431,596,457 compared with $333,040,214 in August, 1941, or an increase of 29.6 per cent. Passenger revenues totaled $80,847,454 compared with $41,130,821 in August, 1941, or an increase of 96.6 per cent.

Lima Extends Its Tank Plant

Lima Locomotive Works, Inc., is completing the equipment of an extension to its tank arsenal at Lima, Ohio, which will be in production well before the end of the year. The expansion will represent an increase of 80 per cent in the size of the tank plant. When it is in full production, the company will be producing five times

Official OWI Photo by Rittase

An M-4 Tank on Test

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as many tanks as were contemplated when the original tank plant was built in 1941.

Lima's tank arsenal built the first of the M-4 type tanks. This was christened at the Lima plant on January 27, 1942. It is of cast-steel and welded construction, and numbers like it which have since been turned out from this plant have already been subjected to the test of actual combat. The Lima tank arsenal is entirely separate from the locomotive plant which is also engaged in the manufacture of cranes, power shovels, and drag lines, as well as machine-tool parts and parts of other war equipment on a sub-contracting basis. The plant is now engaged 100 per cent in war work.

Tighten Reservation Rules

New regulations covering the sale of tickets were placed in effect by all railroads on September 15, in an effort to secure the maximum use of the limited supply of passenger-carrying equipment and to stop the abuse by passengers in making reservations and not canceling them when changing plans. Under the new rules, reservations made 15 days or more in advance must be purchased by in-town reservers before 5 p. m. on the fourteenth business day and by out-of-town reservers before 5 p. m. on the twelfth day but in both cases not less than 3 hours prior to departure.

Reservations made in less than 15 days before departure must be purchased by in-town reservers before 5 p. m. on the following business day and by out-of-town reservers before 5 p. m. on the third day but in both cases not less than three hours prior to departure.

Railroad Teaches Women Ticket Sellers' Technique

Schools to fit young college women for the duties of ticket sellers and train information and reservation bureau attendants have been opened by the Pennsylvania in the 30th Street Station, Philadelphia. Another will be started shortly in Pennsylvania Station, New York. Recently 18 successful candidates completed a similar course of training in Harrisburg, Pa., and were assigned to work in the Harrisburg and Lancaster areas.

The Pennsylvania reports that, while system passenger traffic has reached levels surpassing all previous records, wartime increases in travel have been especially heavy in the East. Thousands of people are daily seeking accommodations for trips that often are long and complicated. Among them are large numbers to whom railroad travel is a novel experience and who require unusual assistance in planning their journeys. As a result, demands upon train information and reservation bureaus, as well as ticket window attendants, have grown even faster than the increase in the volume of travel, and have now reached unprecedented proportions, particularly in the East.

At the same time, the requirements of the war effort have greatly reduced the supply of available men, while many experienced employees have, of course, been taken into military service. The railroad has, therefore, decided to employ women, as it did during World War I, to deal with the public directly or over the telephone in selling tickets, planning trips, supplying information, and reserving space in coaches and Pullmans.

Some of the students are being schooled for work in city ticket offices. The first class of eight young women trained for this service has just been graduated, and a second class of ten has commenced the course. The plan is to graduate ten or twelve young women every five or six weeks, and to assign them to city ticket offices in various parts of the system. The school to be opened in New York will prepare women for the duties of ticket sellers at the windows of large city stations or for work in train information and reservation bureaus. Already 25 of these students have been graduated from an experimental class and assigned positions, and 20 others are now enrolled.

Truck Drivers Get Restless Waiting for Arbitrators

Demands by union truck drivers in several eastern cities for substantial wage increases to become effective September 1 have been generally rejected by truck owners and fleet operators as untimely and excessive. In several cases the controversy has been submitted to the U. S. Conciliation Service for arbitration, or, as in New York, to an impartial arbitrator, with the understanding that any agreements resulting from this procedure will be retroactive to September 1, when the last wage contracts expired. Some unrest among drivers has been reported from several points, and in the past few days in Baltimore brief "wildcat" strikes have developed, affecting to some extent the pick-up and delivery services of railroads serving that city.

Revision of Weighing and Reweighing Rules

A. F. Cleveland, vice-president of the Association of American Railroads, has advised railroad traffic officers and tariff publishing agents of plans to make effective on October 1 a revision of the rules governing the weighing and reweighing of carload freight. The revision will involve a clarification of the so-called tolerance rule which provides that when a car is reweighed upon request, the reweighing must be paid for if the discrepancy in weight is shown to be less than a certain amount.

The proposed change came out of an arbitration conducted by the Interstate Commerce Commission upon a stipulation of facts by the weighing committees of the A. A. R. and the National Industrial Traffic League.

Retirement Board Reports on Fiscal Year Operations

War efforts in 1941-42 have caused a decrease in annuities certified and a drop in unemployment benefits during the year ending June 30, 1942, according to a report issued by the Railroad Retirement Board. "June 30," the report states, "concluded the first fiscal year in which the railroad retirement system operated under a full wartime economy. Improved business conditions in the industry have resulted in increased pay rolls and, consequently, in larger tax collections under the Carriers Taxing Act. Because there was more full-time employment available, relatively fewer employees retired. The postponement of retirements lessened immediate demands on the retirement fund. It also reduced the total payments to be made to eligible individuals who continued to work, since retirement at a later age shortens the period for which they will be drawing annuities.

During the fiscal year, annuity payments certified to the Treasury totaled $100,970,853. At the end of the year, there were 125,755 retired employees on the monthly annuity rolls; their average monthly benefit was $65.93. Pension payments, made to individuals who were formerly on the pension or gratuity rolls of railroads, were certified in the amount of $20,538,463 for the year—about 11 per cent less than for the preceding year. A total of $5,147,462 was awarded to survivors in the form of lump-sum death payments as well as survivor and death benefit annuities.

"The cost of administering the retire-

Class at Philadelphia Studying Ticket Office Routine

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ment system in 1941-42 was $2,903,805. Expenses were 2.3 per cent of benefit payments.

"The improved employment situation of railroad workers during the benefit year which ended in June, 1942, has been reflected in the sharp decline in registered unemployment and the parallel decline in unemployment insurance benefits paid by the Railroad Retirement Board. A total of 517,000 claims were filed in 1941-42; nearly two-thirds were received from December through April, usually a period of heavy unemployment.

"Almost 450,000 payments were made to 75,000 unemployed railroad workers. The number of payments, as compared with 1940-41, was lower by 550,000. The total amount of benefits was halved—from $17,700,000 to $8,900,000. Claims and benefit operations in June, 1942, declined to the lowest point in the history of the railroad unemployment insurance program. The number of unemployment benefits per employee was somewhat below the average for the preceding year and the average number of days compensated was about the same, indicating that although there were fewer workers unemployed in 1941-42, joblessness was only slightly less severe for those who experienced unemployment.

"The employment service of the Railroad Retirement Board greatly expanded its activities during the year. From the beginning of employment service operations on a nation-wide scale in October, 1940, to the end of June, 1942, 70,000 placements were made, over half of them in the period January-June, 1942. Placements in about 300 occupations were reported during the second half of the fiscal year and over 80 per cent of the Class I railroads were serviced in the period.

"The employment service is now conducting a campaign to return annuitants and pensioners skilled in railroad work to war jobs. Of the 40,000 retired railroad employees under age 72 who may be able and willing to return to employment in critical occupations, almost half have already been canavassed by letter.

The scope of the protection offered by the railroad retirement and unemployment insurance systems was broadened this past year by Congressional amendment. On April 8, 1942, following unanimous votes in the House and Senate, the President approved amendments extending the crediting of military service under the retirement act. Legislation had been enacted in 1940 authorizing the crediting of military service prior to 1937; under the recent statute, current and future service in the armed forces during war periods or times of national emergency may also be counted in the determination of rights to annuities. In addition to this major amendment, the new law introduced certain changes found desirable as a result of administrative experience."

No Football Specials This Year

No special train or bus service to football games or other sports events will be permitted during this fall and winter, said a September 13 statement from Director Eastman of the Office of Defense Transportation. Moreover Mr. Eastman is also "directing that steps be taken by my office to prevent the overcrowding of regular trains serving areas in which such events are to be held."

"Passenger train and motor bus equipment," he said, "must be conserved for the movement of troops, the movement of soldiers and sailors on leave, the movement of relatives and friends to and from camps, and the movement of those who must travel on essential business connected with the war. All of these types of travel must have precedence over mere pleasure trips. Passenger travel on public carriers in some sections of the country has increased 100 per cent over a year ago, and there is no section where the increase is less than 33⅓ per cent. Week-end congestion on both trains and buses is a serious problem in all parts of the country. For these reasons the customary heavy train and bus travel to football games and similar events is out of the question this year."

The ODT director was "not unmindful of the benefits derived from college football and other types of sports events," and he was "well aware of the desirability of continuing these games." Thus, he went on, "it should be understood that local attendance at games is not objectionable insofar as this travel can be accommodated by local transportation systems, especially those using steel rails rather than rubber tires." In that connection ODT intends to solicit the cooperation of colleges in making arrangements for the transfer of scheduled games to centers of population. College authorities will also be asked to aid in preventing travel through their control over the distribution of tickets. Members of football teams, Mr. Eastman said, "may, of course, travel on regular trains and buses, but no special service will be available for this purpose."

July Locomotive Shipments

July shipments of railroad locomotives totaled 132 as compared with 142 in June and 87 in July, 1941, according to reports made by builders to the Department of Commerce's Bureau of the Census. Unfilled orders at the end of July totaled 1,720 locomotives, as compared with a revised figure of 1,554 for June 30 and 942 as of July 31, 1941.

Shipments for this year's first seven months totaled 831 locomotives, including 331 steam, nine electrics, 453 Diesel-electrics, and 38 of other types. During the first seven months of 1941, shipments totaled 517 locomotives, including 98 steam, 15 electrics, 369 Diesel-electrics, and 35 of other types. The 1,720 locomotives on order as of July 31, 1942, included 854 steam, 47 electrics, 780 Diesel-electrics, and 39 of other types.

Data supplied by the Car Service Division, Association of American Railroads, on locomotive building in railroad shops

* * *

Pennsy's Pullman Reservation Office at New York

Part of the car diagram room at Pennsylvania Station, New York, where calls for Pullman and coach reservations now keep a staff of 200 busy. Another 100 employees are engaged in giving train information—40 at counters and 60 at the telephones. Less than half this many were required a year ago.

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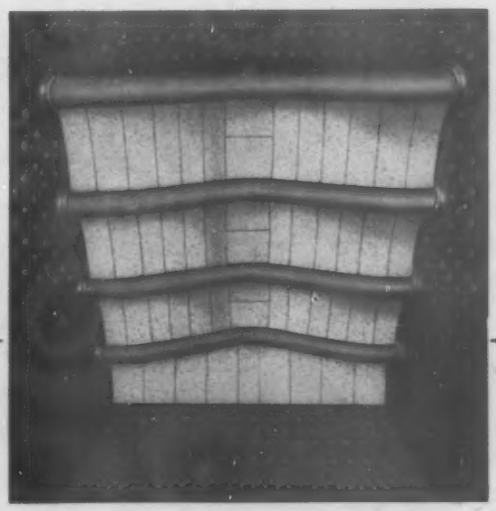
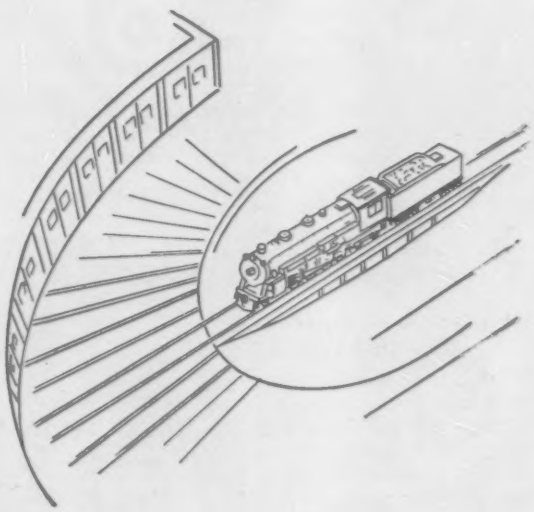
SECURITY ARCH BRICK IS THE FOUNDATION

of an effective economical brick arch





There's More to SECURITY ARCHES *Than Just Brick*

There is a lot to the Security Arch before it goes into the firebox.

Much of its success is due to the brick.

When we took up the development of the Security Sectional Arch we attacked the brick problem first.

Control of materials and processes in every step in the manufacture is the foundation of arch brick performance.

Such brick cannot be made in every brick yard.

The Security Arch gives economical service.

The manufacturer of the brick is one of the reasons.

HARBISON-WALKER REFRACTORIES CO.

Refractory Specialists

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Locomotive Combustion Specialists

show that 11 locomotives, including seven steam and four electrics, were thus produced in July, as compared with none in July, 1941. During this year's first seven months, railroad shops produced 51 locomotives, including 37 steam and 14 electrics, as compared with nine (seven steam and two electrics) in the first seven months of 1941. As of August 1 railroad shops had unfilled orders for 70 locomotives, including 50 steam and 20 electrics.

August Export Traffic

Cars of export freight other than grain or coal unloaded at Atlantic, Gulf and Pacific ports in August totaled 80,412 compared with 56,011 in August 1941, according to the Association of American Railroads. Cars of grain for export unloaded in August at these ports totaled 1,849 compared with 3,592 in the same month last year.

"This traffic is being handled with no serious congestion, due to the continued cooperation of all concerned, particularly the steamship lines, exporters and shippers," the A.A.R. said.

Representation of Employees Is Certified

The National Mediation Board has certified results of a recent election on the Rutland where the maintenance of way employees voted to retain the Brotherhood of Maintenance of Way Employees as their representative under the Railway Labor Act.

The Brotherhood, which won by a 206 to 41 vote, had been challenged by the Utility Workers Organizing Committee, Congress of Industrial Organizations.

In another election the locomotive engineers on the Pittsburg & Shawmut voted to change over from the Brotherhood of Locomotive Engineers to the Brotherhood of Locomotive Firemen & Enginemen. A third recent case involved clerical, office, station and storehouse employees of the Ogden Union Stockyards Company, who chose the Brotherhood of Railway Clerks to represent them.

Movie Features a Freight Yard

The first of a series of sound motion pictures designed to show what goes on behind the scenes in modern railroading, "The Freight Yard," has just been released by the New York Central. The black and white 16-millimeter film opens with a brief introduction showing fast freight trains in action, and then follows a train through a classification yard. Such operations as pushing the cars over the hump, car repairing, inspection routines, locomotive servicing, and yard office procedure are shown in detail. Free from advertising, the picture is designed to be informative, and it is expected that it will appeal to schools, service clubs, and other civic organizations.

The picture is available only in the states served by the New York Central. A list of film libraries handling distribution may be obtained from the Motion Picture Bureau, New York Central System, 466 Lexington Avenue, New York.

Equipment and Supplies

Railroads Get 16,024 of Final 18,000 Freight Cars

Final allocation of the 18,000 cars authorized by the War Production Board to complete the 1942 car building program shows 16,024 of the cars were released to railroads and 1,976 to private car lines. Of the total, 11,676 will be built by contract car builders and 6,324 in railroad company shops. As of September 1, 13,310 of these cars remained undelivered, including 9,985 cars on order with contract car builders and 3,325 with railroad shops. Classification of the 18,000 cars according to type of cars ordered, together with the status of the freight car building program as of September 1, was reported in the *Railway Age* of September 12, page 427. The allocation of the cars by railroads and builders is shown in the accompanying table.

Allocation of Final 18,000 Freight Cars Authorized by WPB to Complete 1942 Construction

Name of Railroad	No.	Type	Builder
Atlantic Coast Line	172	Flat	Greenville Steel Car
	300*	Gondola	Bethlehem Steel Co.
Bessemer & Lake Erie	150	Gondola	Greenville Steel Car
	20	Gondola	Pressed Steel
	93	Hopper	Pullman-Standard
Birmingham Southern	86	Gondola	Pullman-Standard
Central of New Jersey	500*	Gondola	Bethlehem Steel Co.
	246	Hopper	Company Shops
	50	Cov. Hopper	American Car & Foundry
Chesapeake & Ohio	130	Hopper	American Car & Foundry
Chicago & North Western	25	Flat	Company Shops
	250	Flat	Pullman-Standard
Chicago, Burlington & Quincy	400	Flat	Company Shops
	500*	Hopper	Company Shops
	50	Cov. Hopper	Company Shops
Chicago, Milwaukee, St. Paul & Pacific	2	Flat	Company Shops
Chicago, Rock Island & Pacific	300	Flat	Company Shops
Delaware & Hudson	80	Hopper	Company Shops
Denver & Rio Grande Western	780	Gondola	Pressed Steel
Detroit, Toledo & Ironton	50	Flat	Greenville Steel Car
Duluth, Missabe & Iron Range	500	Ore	Pullman-Standard
	500	Ore	General American
	500	Ore	American Car & Foundry
Elgin, Joliet & Eastern	200	Flat	Ralston
	500*	Gondola	American Car & Foundry
	200	Gondola	General American
Great Northern	500	Ore	Bethlehem Steel Co.
Lehigh Valley	960*	Hopper	Bethlehem Steel Co.
Louisville & Nashville	100	Flat	Mount Vernon Car
	100	Cov. Hopper	American Car & Foundry
Missouri Pacific	570	Gondola	Pressed Steel
	100	Cov. Hopper	American Car & Foundry
Nashville, Chattanooga & St. Louis	50	Cov. Hopper	American Car & Foundry
New York Central	303	Flat	Despatch Shops
	1,100*	Gondola	Despatch Shops
New York, Chicago & St. Louis	50	Flat	Pullman-Standard
	50	Cov. Hopper	American Car & Foundry
New York, New Haven & Hartford	13	Flat	Company shops
Norfolk & Western	200	Hopper	Virginia Bridge
Northern Pacific	489	Hopper	American Car & Foundry
Pennsylvania	22	Flat	Company Shops
	1,000	Gondola	Company Shops
	797	Hopper	Company Shops
Pere Marquette	250	Flat	Greenville
Reading	300	Gondola	Company Shops
	300	Hopper	Company Shops
St. Louis Southwestern	50	Flat	Company Shops
Southern Pacific	10	Flat	Company Shops
	90	Gondola	Company Shops
Union Pacific	1,000*	Gondola	Pullman-Standard
Virginian	100	Gondola	Company Shops
	536	Hopper	Company Shops
Wabash	100	Gondola	Company Shops
Western Pacific	300	Flat	Mount Vernon Car
Shippers Car Line	3	Flat	American Car & Foundry
	22	Cov. Hopper	American Car & Foundry
	786	Tank	American Car & Foundry
Various Other Private Car Lines	1	Cov. Hopper	American Car & Foundry
	605	Tank	American Car & Foundry
	559	Tank	General American
Total	18,000		

* Composite wood and steel construction.

LOCOMOTIVES

THE NEW YORK CENTRAL is inquiring for 25 steam locomotives of 4-8-2 wheel arrangement.

THE NORFOLK & WESTERN has received authorization from the War Production Board for the construction of five class "A" steam locomotives of 2-6-6-4 wheel arrangement in the company's own shops. Provided necessary materials can be secured as required, the railroad expects to complete these locomotives next year as follows: two in January; one in February and two in March.

FREIGHT CARS

THE NORFOLK & WESTERN is inquiring for 100 gondola cars of 70 tons' capacity and 25 flat cars of 70 tons' capacity. The

News Department continued on next left-hand page

SUPERHEATERS

... a *Vital* Factor

in steam locomotive operation and efficiency.

It is essential to our national effort that they be correctly maintained.

KEEP 'EM GOING

ELESCO

A 1454

THE SUPERHEATER COMPANY

SUPERHEATERS • FEEDWATER HEATERS
AMERICAN THROTTLES • STEAM DRYERS
EXHAUST STEAM INJECTORS • PYROMETERS

Representative of
AMERICAN THROTTLE COMPANY, INC.
60 East 42nd Street, NEW YORK
122 S. Michigan Blvd., CHICAGO
• • •
Montreal, Canada
THE SUPERHEATER COMPANY, LTD.

order for these cars will be subject to approval of the War Production Board.

THE CARNEGIE-ILLINOIS STEEL CORPORATION has placed an order for 80 mill service gondola cars of 100 tons' capacity with the American Car & Foundry Co.

Supply Trade

W. J. Burke has been elected a vice-president of the **American Car & Foundry Export Co.** Mr. Burke began his business career with a. c. f. in January, 1907, and was elected an assistant secretary of the export company in March, 1928.

Willard E. Henges has been appointed St. Louis, Mo., district manager of the **Graybar Electric Company,** to succeed **George Corrao,** who has asked to be relieved of active duty subject to retirement next year. Mr. Henges began his career with Graybar as a warehouse clerk in 1913, and subsequently progressed through the organization until he became assistant manager in 1936, which position he held until his recent appointment as district manager.

In recognition of its outstanding war production record, the Storage Battery division of the **Philco Corporation** has been awarded the new joint Army-Navy "E" and presentation ceremonies will be held in the near future. The Philco company was started in 1892 to manufacture storage batteries and is currently celebrating its 50th anniversary. It is now 100 per cent converted to war work, producing communications equipment for tanks, airplanes, and ships, shells and fuzes, as well as heavy-duty storage batteries.

OBITUARY

Fred W. Souerbry, Sr., president of the **Keith Railway Equipment Company,** Chicago, died in St. Louis, Mo., on September 14 of a heart ailment.

Construction

CENTRAL OF NEW JERSEY.—The Pennsylvania Public Utility Commission has approved plans calling for the construction of a bridge to carry state highway route No. 170, as it has been relocated, over the main line tracks of the Central of New Jersey in the borough of Ashley; the construction of a crossing at grade where the relocated state highway crosses an industrial siding track in the township of Wilkes-Barre; and the construction of a crossing at grade where the highway crosses the main track of the Nanticoke branch of the railroad at a point on the boundary line between the city of Wilkes-Barre and the township of Wilkes-Barre. Plans for the proposed bridge call for construction of a steel girder consisting of two spans, one 58 ft. 9 in. in length extending over the three main tracks of the railroad, and the other 26 ft. 6 in. in length extending over the site of a proposed future track. The bridge will be supported upon reinforced concrete abutments and piers and will provide a vertical clearance of 23 ft. 4 in. between the bottom of the bridge and the top of rail. The bridge will carry a concrete roadway 40 ft. in width, or, as an alternative, a timber roadway 41 ft. 4 in. in width. Total cost of the improvements is estimated at $290,050.

DELAWARE & HUDSON.—The Pennsylvania Public Utility Commission has approved plans for grade crossing improvements in Wilkes-Barre, Pa., which call for the abolition of the grade crossing where Scott street crosses a single track of the D. & H.; the construction of a new grade crossing where state highway route No. 170, as relocated, crosses this track of the railroad about 88 ft. north of the crossing to be abolished; and the alteration of the existing grade crossing, where Kidder street crosses the same track.

MISSOURI PACIFIC.—This company has asked the Interstate Commerce Commission for authority to construct 5,215 ft. of new track in Bates County, Mo., to connect with the tracks of the Hume-Sinclair Coal Mining Company.

WAR DEPARTMENT.—The U. S. Engineer Office, Albuquerque, N. M., has awarded a contract in amount less than $500,000 to the Waco Construction Company, Waco, Tex., for railroad construction in Arizona. The U. S. Engineer Office, San Francisco, Cal., has awarded a contract in amount less than $500,000 to A. D. Schader, San Francisco, Cal., for the construction of a railroad yard in California. The U. S. Engineer Office, Detroit, Mich., has awarded a contract in amount less than $500,000 to the Christman Company, Lansing, Mich., for the construction of a railroad track, a test track, grading, temporary frame buildings, etc., in Michigan. The U. S. Engineer Office, Ft. Peck, Mont., has awarded a contract in amount less than $500,000 to Peter Kiewit Sons Company, Omaha, Neb., for the construction of a railroad track and trestle in South Dakota. The U. S. Engineer Office, Charleston, S. C., has awarded a contract in amount less than $100,000 to the Boyle Construction Company, Sumter, S. C., for the construction of a railroad spur in South Carolina. The U. S. Engineer Office, Rock Island, Ill., has awarded three contracts, each in amount less than $50,000 as follows: two contracts to Deckert & McDowell, Chicago, one for the construction of a railroad track and the other for a railroad inspection pit track and layout in Illinois, and the other contract to the Savanna Construction Company, Savanna, Ill., for the construction of a railroad inspection pit in Illinois. Other contracts recently awarded, all of them in amount less than $50,000, are as follows: U. S. Engineer Office, Galveston, Tex., to the William A. Smith Construction Company, Inc., Houston, Tex., for railroad track in Texas; U. S. Engineer Office, New Orleans, La., to the Texas & Pacific for a railroad spur in Louisiana; U. S. Engineer Office, Charleston, to Plowden & Roberts, Columbia, S. C., for a railroad spur in South Carolina; U. S. Engineer Office, Detroit, to Owen Ames Kimball Company, Grand Rapids, Mich., for the construction of railroad spurs in Michigan; U. S. Engineer Office, Sacramento, Cal., to R. Goold, Stockton, Cal., for additional spur trackage in California; and U. S. Engineer Office, Wilmington, N. C., to the Grannis, Higgins, Thompson & McDevitt Company, Charlotte, N. C., for spur tracks in North Carolina.

Financial

BALTIMORE & OHIO.—*New Director.*—Crispin Oglebay, president of Oglebay, Norton & Co., Cleveland, Ohio, has been elected a director of this company.

CENTRAL OF NEW JERSEY.—*Tax Ruling Appealed.*—The recent ruling of the U. S. district court at Camden, N. J., that the Central of New Jersey, which is undergoing reorganization in that court, is liable for about $13,000,000 principal amount of taxes for years 1930-1942, but not for $10,000,000 interest on that principal, has been received for consideration by the U. S. Circuit Court of Appeals at Philadelphia, Pa., on petition of the state attorney general and counsel for Jersey City, N. J. The state's claim for interest was not included in the Camden court's ruling which held that 1941 legislation, which provided for payment of railroad tax balances as of December 1, 1940, without interest payments to that date, was constitutional. The state claims that under the ruling, if the new tax laws are held unconstitutional as a result of pending litigation, it may lose the $10,000,000 in interest.

CHICAGO, BURLINGTON & QUINCY.—*Trackage Rights.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to acquire trackage rights over a part of the line of the Colorado & Southern between Utah Junction, Colo., to Denver, 2.3 miles.

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—*Abandonment.*—This company has asked the Interstate Commerce Commission for authority to abandon a part of its main line track extending from Blackbird Junction, Minn., to Island Siding, 13.2 miles.

MIDDLETOWN & UNIONVILLE.—*Trackage Rights.*—This company has asked the Interstate Commerce Commission for authority to operate under trackage rights over a line of the New York, Ontario & Western in Middletown, N. Y., 2.2 miles.

NEW YORK, NEW HAVEN & HARTFORD.—*Back Interest Refused Providence Bondholders.*—The U. S. district court at New Haven, Conn., on September 8 refused payment of back interest to bondholders of the Providence Securities Company, a subsidiary of the N. Y., N. H. & H., noting that the bonds had been offered in exchange for 4 per cent bonds of the rail-

road system and that these bonds were not secured by mortgage. The action was brought by holders of $25,000 of Providence Securities bonds who claimed that since the railroad put out $15,000,000 in back interest on bonds of the system, the Providence bonds were entitled to a similar payment because of the guarantee clause in the original Providence bonds.

PENNSYLVANIA.—*Abandonment by the Pennsylvania, Ohio & Detroit.*—The Pennsylvania, Ohio & Detroit and the Pennsylvania, respectively, have asked the Interstate Commerce Commission for authority to abandon the Walhonding branch and the operation thereof extending from Loudonville, Ohio, to Brink Haven, 17 miles.

PENNSYLVANIA.—*Abandonment by the Pittsburgh, Chartiers & Youghiogheny.*—The Pittsburgh, Chartiers & Youghiogheny has been authorized by Division 4 of the Interstate Commerce Commission to abandon the following lines:

1. That portion of its main line extending northwesterly from Presto, Pa., to the terminus of the line at Beechmont, 2.6 miles; and
2. That portion of its so-called Painter's Run branch extending southeasterly from Borland, Pa., to the end of the branch at Beadling, 1.3 miles.

PERE MARQUETTE.—*Abandonment.*—This company has asked the Interstate Commerce Commission for authority to abandon a line extending from Mecosta, Mich., to Barryton, 11.2 miles.

PERE MARQUETTE.—*Abandonment.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to abandon that portion of a branch line extending southeasterly from Paw Paw, Mich., to Lawton, 3.1 miles.

PORT SAN LUIS TRANSPORTATION.—*Abandonment.*—This company has asked the Interstate Commerce Commission for authority to abandon its narrow-gage line extending from Port San Luis, Calif., to San Luis Obispo, 12.1 miles.

SEABOARD AIR LINE.—*Abandonment.*—This company has been granted authority by Division 4 of the Interstate Commerce Commission to abandon a branch line extending in a southerly direction from a connection with its main line at Wattsville, Ala., to the end of the track at Pell City, eight miles.

SEABOARD AIR LINE.—*Accepts Receivers' Certificates Valued at $9,044,744.*—Receivers of this railroad have been authorized by the U. S. district court to expend $7,107,264 to purchase receivers' certificates valued at $9,044,744 which were offered, in response to the railroad's call for tenders, at an average price of 78.58 per cent of face value and accrued interest. A total of $11,231,744, or approximately 50 per cent of the certificates outstanding were offered, of which $2,187,000 were above the set price of 80 per cent and consequently excluded. These new purchases bring total certificates purchased to date to $12,037,282 face value. (See *Railway Age*, August 22, page 326, for previous purchase.)

SOUTHERN PACIFIC. — *Abandonment.*—This company has asked the Interstate Commerce Commission for authority to abandon a part of its Keeler branch extending from Laws, Calif., to the end of the branch at Benton, 30.7 miles.

SOUTHERN PACIFIC. — *Abandonment.* — This company has been granted authority by Division 4 of the Interstate Commerce Commission to abandon a branch line extending from Daulton, Calif., northerly to the end of the line at Raymond, 9.2 miles.

UNION PACIFIC-NORTHERN PACIFIC.—*Abandonment by the Walla Walla Valley.*—The Union Pacific and the Walla Walla Valley have asked the Interstate Commerce Commission for authority to abandon a branch line extending from Freewater, Oreg., to Umapine, 4.9 miles, 0.8 mile being owned exclusively by the Walla Walla Valley and 4.1 miles by both companies jointly.

WABASH.—*Equipment Trust Certificates.*—This company has been granted authority by Division 4 of the Interstate Commerce Commission to assume liability for $2,000,000 of 2½ per cent equipment trust certificates, maturing in 10 equal annual installments of $200,000 on August 1 in each of the years from 1943 to 1952, inclusive. The issue has been sold at 99.25 to Halsey, Stuart & Co., Inc., making the average annual cost to the company approximately 2.3 per cent.

WHEELING & LAKE ERIE.—*Reduces Dividend.*—The Wheeling & Lake Erie on September 14 reduced its quarterly dividend to 75 cents a share from the regular $1 dividend maintained for the past two and a half years, bringing common disbursements so far this year to $2.75. Increased Federal taxes was given as the reason for the reduction. In addition to the $1 quarterly dividends, an extra year-end common disbursement of $1.50 was paid in 1941.

Average Prices Stocks and Bonds

	Sept. 15	Last week	Last year
Average price of 20 representative railway stocks..	27.58	27.93	29.79
Average price of 20 representative railway bonds..	67.38	66.97	64.10

Dividends Declared

Mahoning Coal Railroad.—(reduced), $5.00 payable October 1 to holders of record September 21.

Pittsburgh, Bessemer & Lake Erie.—75¢, semi-annually, payable October 1 to holders of record September 15.

Providence & Worcester.—Irregular, $2.50, payable October 1 to holders of record September 9.

Wheeling & Lake Erie.—75¢, payable October 1 to holders of record September 25.

SHOP WHISTLE "DRAFTED"—After 59 years of regular service, the big whistle at the Norfolk & Western shops at Roancke, Va.—locally called "Old Gabriel"—has been given a special assignment for the duration. Because it can be heard for many miles, it will now be used only to sound air raid alarms. A new three-toned whistle has been installed for regular daily service.

Railway Officers

EXECUTIVE

Martin Holbrook, whose promotion to assistant to the vice-president-traffic of the Union Pacific, with headquarters at Omaha, Neb., was reported in the *Railway Age* of September 12, was born at Lincoln, Neb., on May 22, 1892, and entered railway service on June 10, 1910, as a clerk in the office of the auditor of freight accounts of the Union Pacific at Omaha. In November, 1912, he was appointed a stenographer in the general freight office and from June, 1917, to May, 1919, served in the U. S. Naval Aviation Corps. Mr. Holbrook returned to the Union Pacific in June, 1919, as a tariff inspector in the general freight office at Omaha. In March, 1925, he was appointed rate clerk and in August, 1935, he was appointed solicitation clerk. He was advanced to chief clerk of the traffic department in May, 1939, which position he held until his recent promotion, effective September 1.

Martin Holbrook

Curtis B. Bennett, whose appointment as assistant to the vice-president of the Chesapeake & Ohio, the New York, Chicago & St. Louis and the Pere Marquette, with headquarters at Cleveland, Ohio, was reported in the *Railway Age* of September 12, was born in Richmond, Ky., on August 23, 1897, and attended Culver Military Academy and graduated in civil engineering from Cornell University in 1919. He joined the Cleveland Railway Company (Cleveland traction company) as field and office engineer immediately after graduation. He was assistant superintendent of the way department of that company from 1932 to 1935; property engineer, from 1935 to 1937; secretary, from 1937 to 1940; and, thereafter, vice-president and secretary. In his new position with the Chesapeake & Ohio lines, Mr. Bennett will be assigned research and work of a specialized character.

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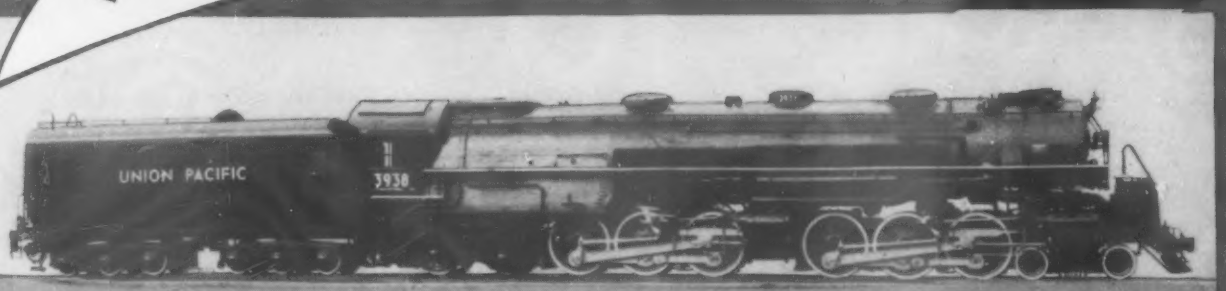
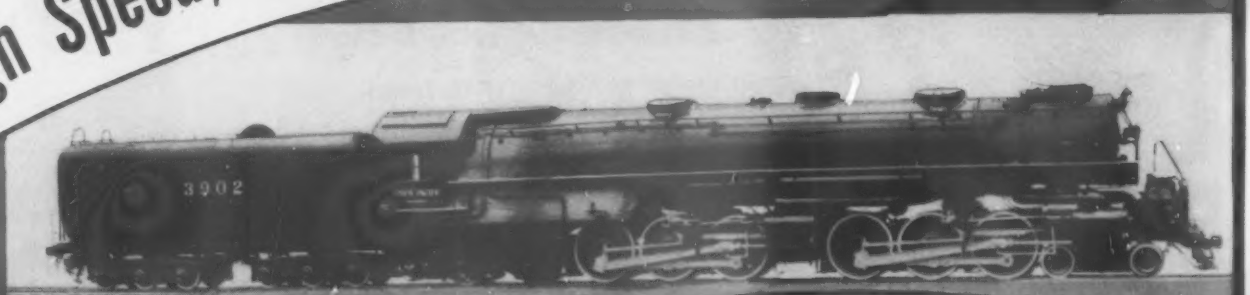
A FLEET OF SIXTY



High Speed, Heavy Duty Freight Locomotives



for the UNION PACIFIC

UNION PACIFIC
OVERLAND ROUTE

Alco

"For Their Size They Are the Best Performing Locomotives Ever Operated on the Union Pacific."

"The last of the 20 Union Pacific 4-6-6-4 type locomotives, No. 3969, is in service today hauling a 100-car train west out of Omaha as did all the others..."

That in part is the unanimous commendatory expression of Union Pacific engineering men and operating officials referring to the performance of the twenty new 4-6-6-4 type locomotives recently delivered by the American Locomotive Company.

The Union Pacific now has a fleet of 60 of these locomotives. The first 15 of this particular type were delivered in 1936 and 25 more in 1937. These single expansion 4-6-6-4 articulated steam locomotives, designed to operate in high-speed freight service in mountain territory, have rapidly received country-wide recognition. To date Alco has built, or has on order 155 of this type locomotive for six different roads.

The last order of twenty were specified to be capable of operating continuously under maximum horsepower output up to 70 miles per hour, to operate on grades of 3 per cent, and to pass curves of 20 degrees.

Locomotives are, without question, one of the most vital items in the entire war effort.

AMERICAN LOCOMOTIVE

Manufacturers of Mobile Power

Steam, Diesel and Electric Locomotives, Marine Diesels, Tanks, Gun Carriages and other Ordnance

FINANCIAL, LEGAL AND ACCOUNTING

Ira C. Belden, attorney of the Chicago & North Western at Chicago, retired on September 12 after more than 44 years' service with that road.

James B. O'Shaughnessy, formerly an associate in the Chicago law firm of Rosen, Francis & Cleveland, has been appointed an attorney of the Chicago & North Western, with his headquarters located at Chicago.

Clyde W. Tilton, whose promotion to general auditor of the Great Northern, with headquarters at St. Paul, Minn., was reported in the *Railway Age* of September 12, was born at La Cross, Wis., on March 12, 1875, and attended business college. He entered railway service on August 13, 1894, with the Great Northern and on November 1, 1901, was appointed chief clerk to the auditor of passenger receipts. A year later, he was appointed acting auditor of passenger receipts, and on May 1, 1903,

Clyde W. Tilton

he was promoted to auditor of passenger receipts. During World War I, Mr. Tilton served the United States Railroad Administration as assistant federal auditor at St. Paul, returning to the Great Northern as assistant general auditor on March 1, 1920, which position he held until his recent promotion, which became effective September 1.

OPERATING

W. H. Moulthrop has been appointed supervisor of labor employment of the Southern Pacific, with headquarters at San Francisco, Cal.

Dr. K. C. Walden has been appointed acting superintendent and acting medical director of the relief department of the Atlantic Coast Line, with headquarters at Wilmington, N. C.

H. W. Hall has been appointed assistant superintendent of the San Joaquin division of the Southern Pacific, with headquarters at Bakersfield, Cal., succeeding **F. W. Cantrell,** who has been transferred to Los Angeles, Cal., relieving **Rex E. Hallawell,** whose promotion to general superintendent of transportation, with headquarters at San Francisco, Cal., was reported in the *Railway Age* of September 12.

Samuel F. Knowles, whose retirement as general manager of the Gulf department of the Railway Express Agency at Atlanta, Ga., was reported in the *Railway*

Samuel F. Knowles

Age of September 5, started his career as an express messenger in October, 1890. After ten years he was transferred to office work and within a year was a correspondent and later express agent. He became clerk in the office of the superintendent at Chattanooga and during his 15 years in that city advanced through various positions to superintendent in January, 1914. In 1919 Mr. Knowles became superintendent of the Alabama division at Birmingham, Ala., where he served until April, 1936, when he became general manager of the Gulf department.

Ralph C. Diamond, whose promotion to superintendent of the Indianapolis division of the Baltimore & Ohio, with headquarters at Indianapolis, Ind., was reported in the *Railway Age* of September 12, was born at Duquesne, Pa., on May 15, 1902, and entered railway service on February 25, 1916, as a call boy on the B. & O. Cincinnati (Ohio) terminals at Elmwood Place, and Ivorydale. In 1917 he was promoted to yard clerk and in April, 1925, he was advanced to yardmaster in the Ivorydale yards. In 1931 he was transferred to the St. Louis Division side of the Cincinnati terminals and also worked as relief general yardmaster and relief assistant trainmaster until April, 1934, when he was promoted to night assistant trainmaster of the Cincinnati terminals. Mr. Diamond was advanced to trainmaster of the Indianapolis subdivision on August 1, 1938, which position he held until his recent promotion.

Ralph C. Diamond

Stanley F. Pitcher, whose appointment as general manager of the Gulf department of the Railway Express Agency at Atlanta, Ga., was reported in the *Railway Age* of September 5, entered the express business as clerk at Chattanooga, Tenn., later becoming assistant cashier. Mr. Pitcher served overseas with the A. E. F. from October, 1918, to July, 1919, when he returned to his former position at Chattanooga. Two years later he became chief clerk, later becoming assistant route agent and route agent at Atlanta. In 1925 Mr. Pitcher was appointed terminal agent at

Stanley F. Pitcher

Atlanta and became general agent in 1931. In 1936 he was appointed superintendent of the Georgia division and in July, 1937, he became superintendent of organization for the Southern departments. In November, 1939, he was appointed chairman of the Standard Practices Committee at New York, becoming executive assistant to the president in August, 1940.

Andrew N. Baker, a conductor of the Atchison, Topeka & Santa Fe at Wellington, Kans., has been promoted to safety supervisor of the Western lines, a newly created position, with headquarters at Amarillo, Tex.

Rex E. Hallawell, whose promotion to general superintendent of transportation of the Southern Pacific, with headquarters at San Francisco, Cal., was reported in the *Railway Age* of September 12, has also been appointed superintendent of car service of the Northwestern Pacific and the San Diego & Arizona Eastern.

J. M. Miller, division engineer of the Elkins division of the Western Maryland at Cumberland, Md., has been appointed

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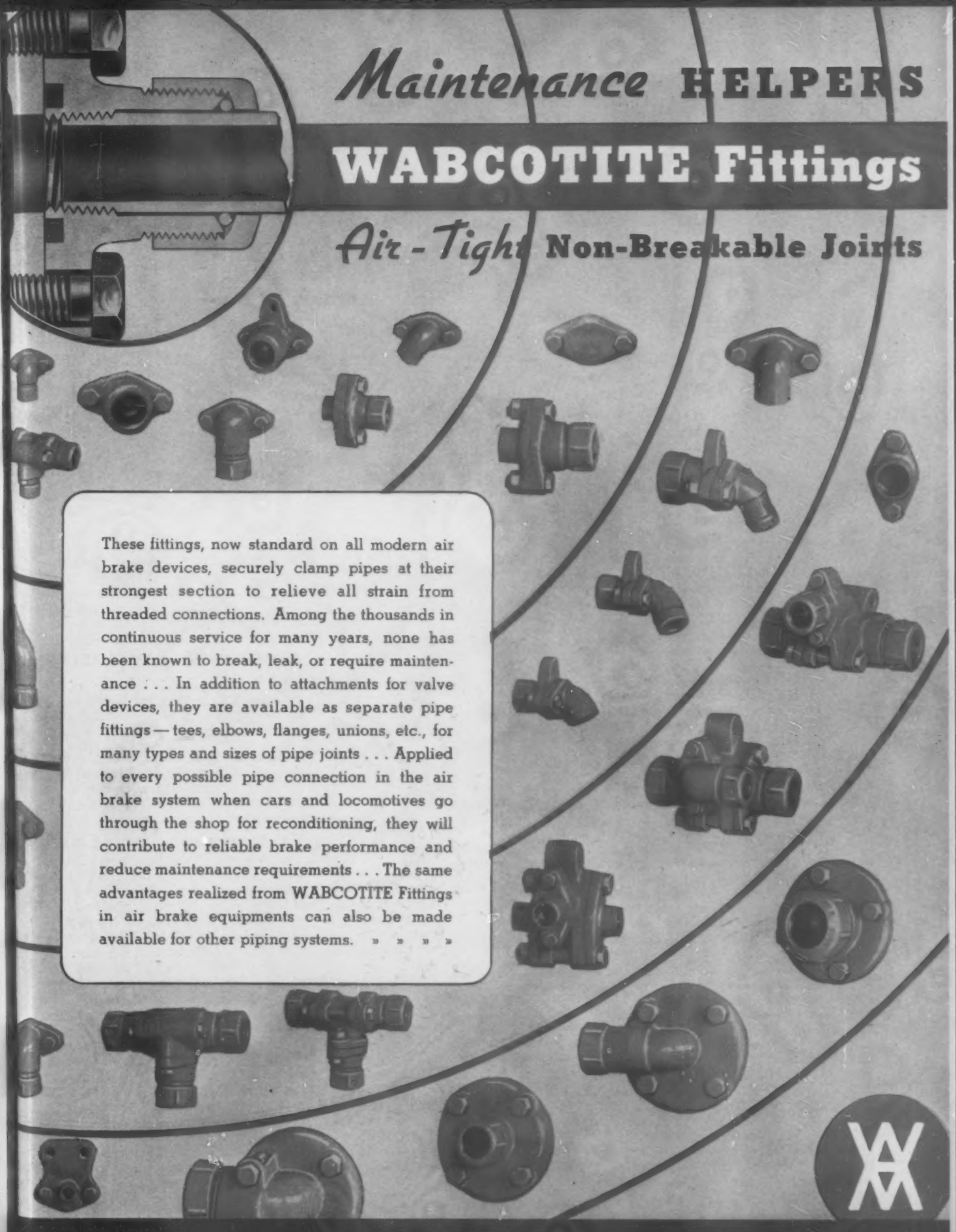

Maintenance HELPERS

WABCOTITE Fittings

Air-Tight Non-Breakable Joints

These fittings, now standard on all modern air brake devices, securely clamp pipes at their strongest section to relieve all strain from threaded connections. Among the thousands in continuous service for many years, none has been known to break, leak, or require maintenance . . . In addition to attachments for valve devices, they are available as separate pipe fittings — tees, elbows, flanges, unions, etc., for many types and sizes of pipe joints . . . Applied to every possible pipe connection in the air brake system when cars and locomotives go through the shop for reconditioning, they will contribute to reliable brake performance and reduce maintenance requirements . . . The same advantages realized from WABCOTITE Fittings in air brake equipments can also be made available for other piping systems. » » » »

WESTINGHOUSE AIR BRAKE CO.

WILMERDING, PENNSYLVANIA

trainmaster, with the same headquarters. **L. B. Romaine** has been appointed trainmaster at Cumberland and **B. E. Boyer** has been appointed trainmaster at Elkins, W. Va.

Felix S. Hales, bridge engineer of the New York, Chicago & St. Louis (Nickel Plate), with headquarters at Cleveland,

Felix S. Hales

Ohio, has been promoted to assistant general superintendent, with the same headquarters, succeeding **J. C. Wallace,** whose promotion to chief engineer was reported in the *Railway Age* of September 5. Mr. Hales was born at Wilson, N. C., on April 13, 1893, and graduated in engineering from North Carolina State college in 1913, and in civil engineering from Cornell University in 1916. He entered railway service in 1916 as a draftsman for the Nickel Plate on grade elimination work and served in that capacity until June, 1918, when he joined the U. S. Army as a second lieutenant in the field artillery. He returned to his former position with the Nickel Plate in December, 1918, and in 1919 he was appointed assistant to the corporate chief engineer. In 1920, Mr. Hales was appointed assistant engineer in charge of bridge design and steel inspection and in April, 1924, he was transferred to the track department as assistant engineer. Four months later, he was promoted to engineer of track, with headquarters as before at Cleveland, and his jurisdiction was extended to include the Lake Erie and Western district in 1925 and the entire system in 1927. In 1928, Mr. Hales was appointed engineer of the Cleveland Terminal improvements, and in 1934 he returned to his former position as engineer of track. On December 1, 1939, he was promoted to bridge engineer, which position he held until his recent promotion, effective September 1.

TRAFFIC

James B. Warren, passenger and freight traffic agent of the Western Pacific at Chicago, has been promoted to assistant general passenger agent at that point, succeeding **John C. Nolan,** who has been given a leave of absence for military service.

S. D. Burnside, city freight agent of the Denver & Rio Grande Western at Salt Lake City, Utah, has been promoted to general agent at Reno, Nev., succeeding **J. M. Jensen,** who has been advanced to commercial agent at Sacramento, Cal., replacing **A. F. Snedden,** deceased.

John Y. Blumstrom, district freight and passenger agent of the Northern Pacific at Aberdeen, Wash., has been promoted to general agent at Lewiston, Idaho, succeeding **A. F. Shirley,** who has retired. **W. H. Jaynes** has been appointed general agent at Bellingham, Wash., succeeding **C. E. Fulton** who has been appointed assistant general agent at Walla Walla, Wash.

David F. Woods, general agent of the Chicago & Eastern Illinois at Pittsburgh, Pa., has been promoted to general freight agent in charge of traffic service and development, with headquarters at Chicago, a newly created position. **G. T. Whitmore,** assistant general agent at Detroit, Mich., has been advanced to general agent at Pittsburgh, succeeding Mr. Woods. Mr. Woods was born at Judson, Ind., on August 30, 1895, and entered C. & E. I. service on May 19, 1913, as a yard clerk at Mecca, Ind., later being transferred to Chicago Heights, Ill., where he worked at

David F. Woods

various clerical assignments. In 1923 he was appointed traffic agent at Chicago Heights and in 1925 he was advanced to general agent at Pittsburgh, which position he held until his recent promotion, effective September 16.

MECHANICAL

G. O. Willhide, master mechanic of the Western Maryland, has been appointed acting superintendent motive power, with headquarters as before at Hagerstown, Md., to succeed **C. J. Wolfe,** who has been granted leave of absence to accept appointment as associate director, in charge of the Mechanical section of the Division of Railway Transport, Office of Defense Transportation, as reported in the *Railway Age* of September 12.

Ray L. Rex, whose appointment as mechanical assistant of the New York, Ontario & Western at Middletown, N. Y., was reported in the *Railway Age* of July 25, was born on May 2, 1901, at Lehighton, Pa. Mr. Rex served with the A. E. F. in France in 1918 and 1919 and in the latter year he went with the New Jersey Zinc Company Laboratory. He entered railroad service on June 1, 1920, with the Lehigh Valley as boilermaker helper at the Lehighton enginehouse, becoming machinist apprentice in September, 1920. In

Ray L. Rex

September, 1924, Mr. Rex became machinist, then serving successively as time study engineer and piece rate setter, dumper plant engineer at Perth Amboy, N. J., chief engineer, and plant engineer and general foreman of locomotive and car shops at Perth Amboy.

ENGINEERING & SIGNALING

H. Smith, general inspector of the Wheeling & Lake Erie, has been promoted to general foreman of bridges and buildings, a newly created position.

E. L. Rankin, architect of the Gulf, Colorado & Santa Fe at Galveston, Tex., has been commissioned a captain in the Corps of Engineers, U. S. Army, with headquarters at Galveston.

J. C. Wallace, whose promotion to chief engineer of the New York, Chicago & St. Louis (Nickel Plate), with headquarters at Cleveland, Ohio, was reported in the *Railway Age* of September 5, was born at Harrisburg, Pa., on November 1, 1886, and graduated in civil engineering from Pennsylvana State College in 1911. He entered railway service in April, 1914, as a structural draftsman on the Chicago, Milwaukee, St. Paul & Pacific and four years later he went with the Lake Erie & Western (now part of the Nickel Plate), as engineer of structures, later becoming district engineer at Indianapolis, Ind. In May, 1925, Mr. Wallace was promoted to assistant chief engineer of the Nickel Plate, with headquarters at Cleveland, and on September 1, 1940, he was advanced to assistant general superintendent, with the same headquarters, the position he held until his recent promotion, effective September 1.

E. C. Shreve, assistant division engineer of the Western Maryland, with headquarters at Hagerstown, Md., has been promoted to division engineer of the Elkins division, with headquarters at Cumberland,

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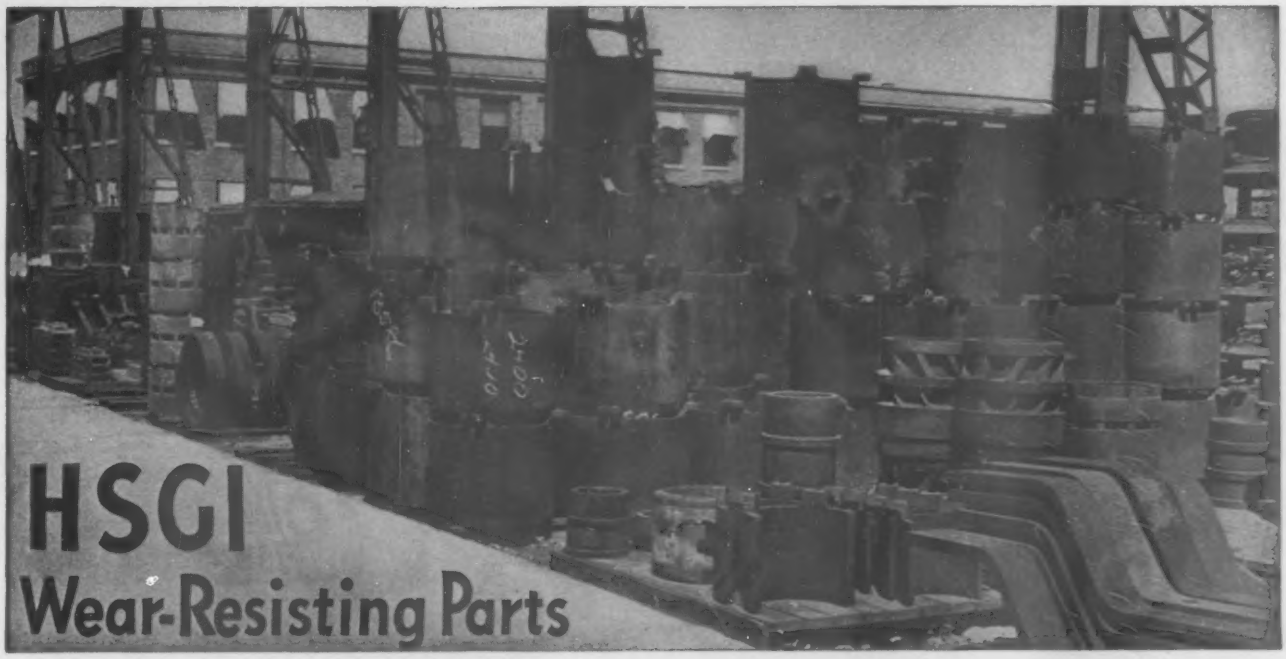

Help to Conserve Materials

THE wear-resisting properties of HUNT-SPILLER *Air Furnace* GUN IRON are playing a very vital part in the battle to conserve materials.

Perfect foundry control makes possible the manufacture of castings very close to finished sizes. This feature means less waste of material and a savings in machining costs.

The long service life of H S G I Wear-resisting Parts also contributes to the availability of power, reduces maintenance costs and aids in the conservation of fuel.

H S G I
Reg. U. S. Trade Mark
Cylinder Bushings
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Md., succeeding **J. M. Miller,** who has been promoted to trainmaster, transportation department.

R. T. Blewitt, designing engineer in the bridge department of the New York, Chicago & St. Louis (Nickel Plate) at Cleveland, Ohio, has been promoted to bridge engineer, with the same headquarters, succeeding **Felix S. Hales,** whose promotion to assistant general superintendent is reported elsewhere in these columns.

S. T. Robertson, whose promotion to district maintenance engineer of the Chicago, Rock Island & Pacific, with headquarters at Kansas City, Mo., was reported in the *Railway Age* of July 25, was born at Bivins, Tex., on July 7, 1900, and entered Rock Island service in March, 1929, as a rodman at Ft. Worth, Tex. He later served successively as section laborer at Chico, Tex., signal helper on the Panhandle-Indian Territory division, rodman and chainman on the Oklahoma and Southern divisions and trucker at Ringgold, Tex. In January, 1933, Mr. Robertson was appointed track inspector, later being appointed track supervisor. From June 2, 1938, to April 1, 1939, he served as roadmaster and track supervisor at various points on the Oklahoma and the Arkansas-Louisiana divisions. Mr. Robertson was advanced to acting roadmaster at Chickasha, Okla., on the latter date and on October 9, 1939, he was transferred to Little Rock, Ark. On April 24, 1942, he was promoted to engineer-roadmaster of the Burlington-Rock Island, with headquarters at Houston, Tex., which position he held until his promotion, on July 1, to district maintenance engineer of the Rock Island.

OBITUARY

William A. Hayes, who retired in January, 1940, as general attorney in Wisconsin of Minneapolis, St. Paul & Sault Ste. Marie, with headquarters at Milwaukee, Wis., died in that city on September 13.

Operating Revenues and Operating Expenses of Class I Steam Railways

Compiled from 133 Monthly Reports of Revenues and Expenses Representing 136 Class I Steam Railways
(Switching and Terminal Companies Not Included)

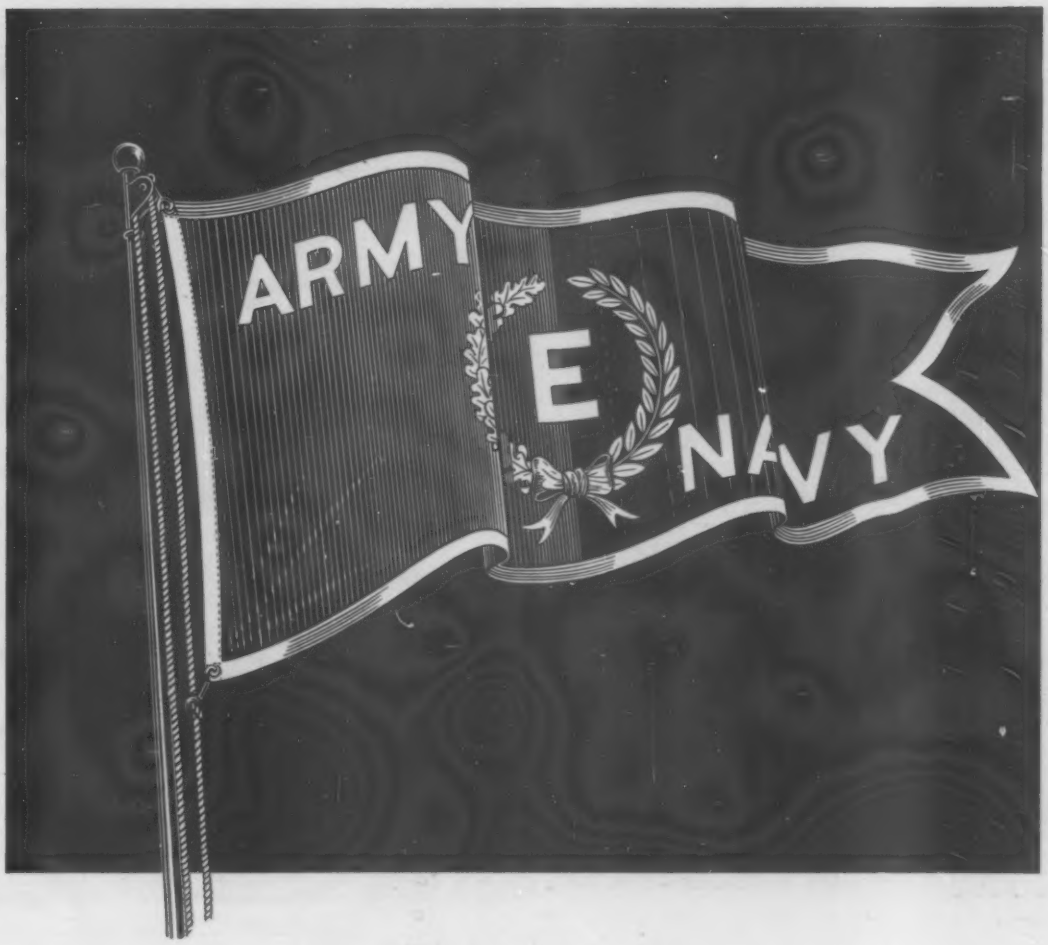
FOR THE MONTH OF JULY, 1942 AND 1941

Item	United States		Eastern District		Southern District		Western District	
	1942	1941	1942	1941	1942	1941	1942	1941
Miles of road operated at close of month	231,048	232,270	56,888	57,212	43,754	44,126	130,406	130,932
Revenues:								
Freight	$533,085,991	$405,502,647	$211,261,616	$168,757,387	$99,422,386	$74,815,098	$222,401,989	$161,930,162
Passenger	91,939,231	47,401,822	43,701,714	24,211,131	17,046,835	7,377,357	31,190,682	15,813,334
Mail	8,550,333	8,415,977	3,103,824	3,087,364	1,539,299	1,412,768	3,907,210	3,915,845
Express	6,406,639	3,603,067	2,154,415	1,344,267	897,078	589,649	3,355,146	1,669,151
All other operating revenues	25,199,346	20,522,793	11,606,255	9,872,345	3,101,261	2,294,767	10,491,830	8,355,681
Railway operating revenues	665,181,540	485,446,306	271,827,824	207,272,494	122,006,859	86,489,639	271,346,857	191,684,173
Expenses:								
Maintenance of way and structures	73,487,147	54,709,486	29,600,900	22,428,904	11,860,206	8,726,422	32,026,041	23,554,160
Maintenance of equipment	100,951,390	83,234,063	44,047,611	39,043,206	19,773,095	15,224,502	37,130,684	28,966,355
Traffic	9,786,142	9,324,647	3,551,765	3,416,644	1,882,389	1,768,504	4,351,988	4,139,499
Transportation—Rail line	186,676,966	147,568,895	84,481,148	67,921,970	31,570,762	23,942,206	70,625,056	55,704,719
Transportation—Water line	d2,253	107,814	.....	.....	.....	.....	d2,253	107,814
Miscellaneous operations	6,308,300	4,138,092	2,551,989	1,752,060	947,441	478,612	2,808,870	1,907,420
General	13,269,255	11,342,216	5,409,740	4,565,759	2,490,519	2,136,098	5,368,996	4,640,359
Transportation for investment—Cr.*	.....	390,267	.....	73,694	.....	73,046	.....	243,527
Railway operating expenses	390,476,947	310,034,946	169,643,153	139,054,849	68,524,412	52,203,298	152,309,382	118,776,799
Net revenue from railway operations	274,704,593	175,411,360	102,184,671	68,217,645	53,482,447	34,286,341	119,037,475	72,907,374
Railway tax accruals	125,838,406	57,195,165	45,094,964	23,403,173	31,303,398	14,280,155	49,440,044	19,511,837
Railway operating income	148,866,187	118,216,195	57,089,707	44,814,472	22,179,049	20,006,186	69,597,431	53,395,537
Equipment rents—Dr. balance	12,593,505	9,133,789	6,064,478	4,081,088	669,489	d235,025	5,859,538	5,287,726
Joint facility rent—Dr. balance	3,271,317	2,700,502	1,743,946	1,532,236	355,175	301,429	1,172,196	866,837
Net railway operating income	133,001,365	106,381,904	49,281,283	39,201,148	21,154,385	19,939,782	62,565,697	47,240,974
Ratio of expenses to revenues (per cent)	58.7	63.9	62.4	67.1	56.2	60.4	56.1	62.0
Depreciation included in operating expenses	20,809,848	18,114,543	9,089,236	7,936,420	3,967,278	3,645,894	7,753,334	6,532,229
Amortization of defense projects	7,401,859	22,571	2,350,912	6,027	2,036,916	16,544	3,014,031	.....
Pay roll taxes	14,649,938	11,565,527	6,360,239	5,158,620	2,556,459	1,937,657	5,733,240	4,469,250
All other taxes	‡111,188,468	45,629,638	38,734,725	18,244,553	28,746,939	12,342,498	43,706,804	15,042,587

FOR SEVEN MONTHS ENDED WITH JULY, 1942 AND 1941

Miles of road operated at close of month‡	231,437	232,286	56,906	57,238	43,854	44,185	130,677	130,863
Revenues:								
Freight	$3,206,247,605	$2,411,528,974	$1,329,652,700	$1,045,782,616	$633,696,851	$473,484,965	$1,242,898,054	$892,261,393
Passenger	484,217,832	284,774,787	232,683,399	145,910,898	92,441,340	50,049,805	159,093,093	88,814,084
Mail	61,155,376	60,253,465	22,296,085	22,358,919	10,951,077	10,381,923	27,908,214	27,512,623
Express	47,475,871	33,332,890	16,651,820	13,071,223	8,022,309	7,059,155	22,801,742	13,202,512
All other operating revenues	146,843,883	119,980,006	69,519,827	59,270,516	19,060,376	14,939,056	58,263,680	45,770,434
Railway operating revenues	3,945,940,567	2,909,870,122	1,670,803,831	1,286,394,172	764,171,953	555,914,904	1,510,964,783	1,067,561,046
Expenses:								
Maintenance of way and structures	423,474,146	318,394,922	170,934,002	128,238,211	74,698,446	57,279,061	177,841,698	132,877,650
Maintenance of equipment	683,199,843	544,087,102	308,307,489	253,492,887	130,602,111	101,250,811	244,290,243	189,343,404
Traffic	67,956,014	64,094,501	24,634,292	22,822,145	13,463,021	12,508,394	29,858,701	28,763,962
Transportation—Rail line	1,244,684,576	957,630,653	571,109,979	443,996,220	212,445,456	162,344,496	461,129,141	351,289,937
Transportation—Water line	20,567	3,043,624	.....	.....	.....	.....	20,567	3,043,624
Miscellaneous operations	38,047,542	25,420,020	15,524,513	10,986,174	6,209,004	3,871,681	16,314,025	10,562,165
General	90,356,700	77,683,728	36,357,728	30,625,101	17,351,338	15,111,741	36,647,634	31,946,886
Transportation for investment—Cr.*	.....	1,970,708	.....	331,408	.....	442,735	.....	1,196,565
Railway operating expenses	2,547,739,388	1,988,383,842	1,126,868,003	889,829,330	454,769,376	351,923,449	966,102,009	746,631,063
Net revenue from railway operations	1,398,201,179	921,486,280	543,935,828	396,564,842	309,402,577	203,991,455	544,862,774	320,929,983
Railway tax accruals	617,295,042	304,471,406	245,639,182	132,350,639	159,104,165	73,292,193	212,551,695	98,828,574
Railway operating income	780,906,137	617,014,874	298,296,646	264,214,203	150,298,412	130,699,262	332,311,079	222,101,409
Equipment rents—Dr. balance	77,611,967	57,599,081	38,497,243	27,717,472	4,718,075	2,151,433	34,396,649	27,730,176
Joint facility rent—Dr. balance	21,781,912	19,211,884	11,631,141	10,487,335	2,384,806	2,125,939	7,765,965	6,598,610
Net railway operating income	681,512,258	540,203,909	248,168,262	226,009,396	143,195,531	126,421,890	290,148,465	187,772,623
Ratio of expenses to revenues (per cent)	64.6	68.3	67.4	69.2	59.5	63.3	63.9	69.9
Depreciation included in operating expenses	138,155,965	125,392,388	62,033,482	55,045,581	27,835,069	25,281,336	48,287,414	45,065,471
Amortization of defense projects	41,033,526	28,187	13,537,036	11,643	10,658,084	16,544	16,838,406	.....
Pay roll taxes	95,780,574	74,008,998	42,188,582	32,973,321	16,969,478	12,912,654	36,622,514	28,123,023
All other taxes	†521,514,468	230,462,408	203,450,600	99,377,318	142,134,687	60,379,589	175,929,181	70,705,551

d Decrease, deficit, or other reverse items.
‡ Represents an average of the mileage reported at the close of each month within the period.
* General Account VIII. Transportation for Investment—Cr. canceled effective January 1, 1942.
† Includes Federal income tax, surtax and excess profits tax amounting to $369,708,989.
‡ Includes Federal income tax, surtax and excess profits tax amounting to $88,010,544.
Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.



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FOR INDEX

TO ADVERTISERS

See Last White Page

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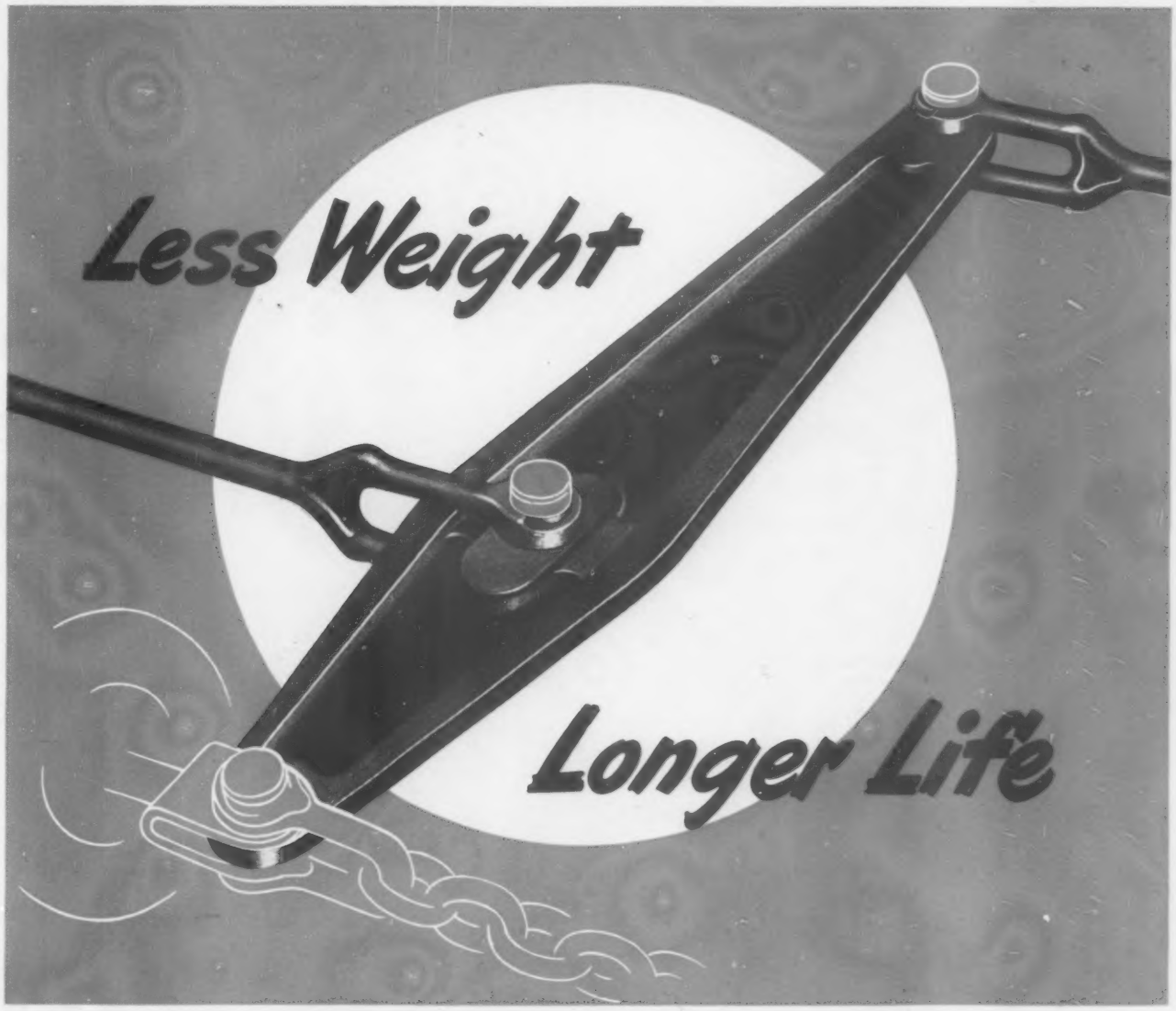
Index to Advertisers

September 19, 1942



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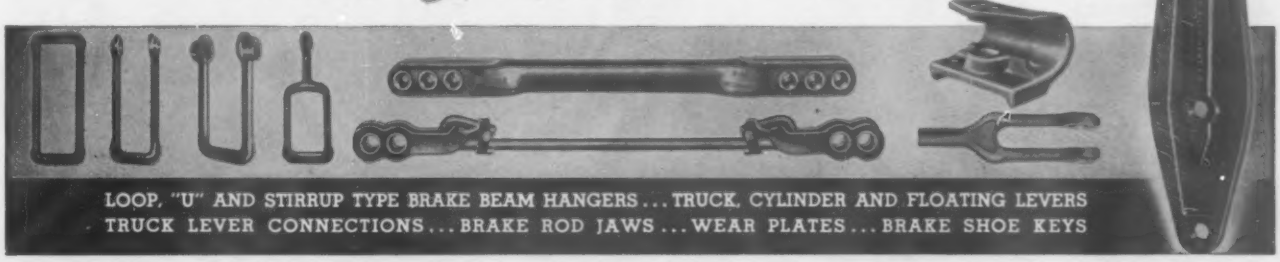

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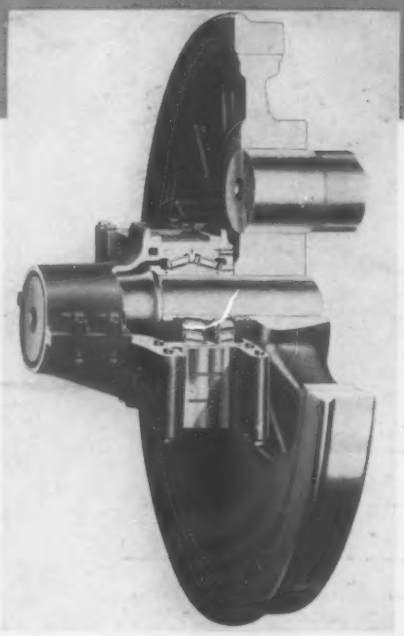

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It has now been definitely proved that locomotive driving wheel tires last considerably longer when the driving axles are mounted on TIMKEN Bearings. The intervals between tire turnings are also greatly lengthened.

This is due to the fact that Timken Bearing Equipped driving axles are perfectly aligned and squared with the locomotive frame and with each other, enabling close operating clearances to be constantly maintained. As a further result, greatly increased smoothness of locomotive operation is also secured, *because the wheels are kept round due to the effect of true revolving action.*

A Timken Bearing Equipped locomotive is given a permanent "operating lateral" when the bearings are applied. No breaking-in is required. On the other hand in a friction bearing locomotive the lateral between the boxes and hub liners is set up very close to begin with so as to allow for wear during the running-in period. However, by the time the locomotive "frees itself" considerable wear has developed.

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